ANALOGUE ADDRESSABLE FIRE PANEL

IRIS

INSTALLATION AND PROGRAMMING MANUAL

CE2831

Table of Contents

ATTENTION!
This manual contains an information about the limitations in using and operation of the product, as and information about the limits in the responsibility of the manufacturer.
Please read the operation manual carefully before starting the installation.

STANDARDS AND CONFORMITY
The addressable fire alarm control panel IRIS is designed and certified according and with conformity to EN 54 – 2/4 standard. Conforms and approved in accordance with CPR (Construction Products Regulation).

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2831
DoP No: 065

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1139h/01

2831-CPR-F1672

Teletek Electronics JSC, 14A Srebarna Str., 1407 Sofia, Bulgaria

EN 54-2:1997/A1:2006/AC:1999; EN 54-4:1997/A2:2006/AC:1999

IRIS P, IRIS M
Intended for use in fire detection and fire alarm systems in and around buildings.

Essential Characteristics	Performance
Performance under fire conditions	Pass
Response delay (response time to fire)	Pass
Operational reliability	Pass
Durability of operational reliability and response delay: temperature resistance	Pass
Durability of operational reliability: humidity resistance	Pass
Durability of operational reliability: vibration resistance	Pass
Durability of operational reliability: electrical resistance	Pass

Options with requirements	Performance
Output to fire alarm devices	Pass
Output to fire alarm routing equipment	Pass
Output to fire protection equipment type A	Pass
Delays to outputs	Pass
Type A dependency	Pass
Fault signals from points	Pass
Disablement of addressable points	Pass
Test condition	Pass

GUARANTEE

The guarantee terms are determined by the serial number (barcode) of the electronic device.
During the guarantee period the manufacturer shall, at its sole discretion, replace or repair any defective product when it is returned to the factory. All parts replaced and/or repaired shall be covered for the remainder of the original guarantee, or 6 months, whichever period is longer. The original purchaser shall immediately send manufacturer a written notice of the defective parts or workmanship.

INTERNATIONAL GUARANTEE

Foreign customers shall possess the same guarantee rights as those any customer in Bulgaria, except that manufacturer shall not be liable for any related customs duties, taxes or VAT, which may be payable.

GUARANTEE PROCEDURE

The guarantee will be granted when the appliance in question is returned. The guarantee period and the period for repair are determined in advance. The manufacturer shall not accept any product, of which no prior notice has been received via the RAN form at: http://www.teletek-electronics.com/en/support/Service
The setup and programming included in the technical documentation shall not be regarded as defects. Teletek Electronics bears no responsibility for the loss of programming information in the device being serviced.

CONDITIONS FOR WAIVING THE GUARANTEE

This guarantee shall apply to defects in products resulting only from improper materials or workmanship, related to its normal use. It shall not cover:
• Devices with destroyed serial number (barcode);
• Damages resulting from improper transportation and handling;
• Damages caused by natural calamities, such as fire, floods, storms, earthquakes or lightning;
• Damages caused by incorrect voltage, accidental breakage or water; beyond the control of the manufacturer;
• Damages caused by unauthorized system incorporation, changes, modifications or surrounding objects;
• Damages caused by peripheral appliances unless such peripheral appliances have been supplied by the manufacturer;
• Defects caused by inappropriate surrounding of installed products;
• Damages caused by failure to use the product for its normal purpose;
• Damages caused by improper maintenance;
• Damages resulting from any other cause, bad maintenance or product misuse.
In the case of a reasonable number of unsuccessful attempts to repair the product, covered by this guarantee, the manufacturer's liability shall be limited to the replacement of the product as sole compensation for breach of the guarantee. Under no circumstances shall the manufacturer be liable for any special, accidental or consequential damages, on the grounds of breach of guarantee, breach of agreement, negligence, or any other legal notion.

WAIVER

This Guarantee shall contain the entire guarantee and shall be prevailing over any and all other guarantees, explicit or implicit (including any implicit guarantees on behalf of the dealer, or adaptability to specific purposes), and over any other responsibilities or liabilities on behalf of the manufacturer. The manufacturer does neither agree, nor empower, any person, acting on his own behalf, to modify, service or alter this Guarantee, nor to replace it with another guarantee, or another liability with regard to this product.

UNWARRANTED SERVICES

The manufacturer shall repair or replace unwarranted products, which have been returned to its factory, at its sole discretion under the conditions below. The manufacturer shall accept no products for which no prior notice has been received via the RAN form at: http://www.teletek-electronics.com/en/support/Service.
The products, which the manufacturer deems repairable, will be repaired and returned. The manufacturer has prepared a price list and those products, which can be repaired, shall be paid for by the Customer. The devices with unwarranted services carry 6 month guarantee for the replaced parts.
The closest equivalent product, available at the time, shall replace the products, the manufacturer deems un-repairable. The current market price shall be charged for every replaced product.

ATTENTION!
This manual contains an information about the limitations in using and operation of the product, as and information about the limits in the responsibility of the manufacturer.
Please read the operation manual carefully before starting the installation.

> ⚠ **While every effort has been made to ensure that the information in this manual is accurate and complete, no liability can be accepted for any errors or omissions.**
> **The manufacturer reserves the right to change the specifications of the equipment described in that manual without notice.**

1. INTRODUCTION

1.1 General Description

IRIS is an analogue addressable fire panel with maximum coverage of 96 zones and connecting 1 to 4 loops. The panel supports communication protocol *Teletek Electronics (IRIS TTE Loop)*.

An arbitrary number of devices can be added to each zone thus ensuring the easy adaptation of the system to any type of configuration.

To avoid or significantly diminish problems when mounting the system it must be carefully planned prior to installation. This includes: establishing an address for every device and planning a name of maximum 40 digits (including the spaces) for each address, thereby ensuring easy access to the device.

According to the acting standards for establishing fire systems and the plan of the building, the devices must be grouped in zones.

> ⚠ **Every IRIS TTE Loop provides up to 250 devices**!

1.2 Panel Versions

The IRIS analogue addressable fire alarm panel is available in two versions:

- **IRIS P** - The panel is mounted in enclosure with separate plastic cover and metal bottom.

  IRIS P is designed for flush mounting on 25 mm thick drywall (see item 2.1).

- **IRIS M** (Model: PRO) - The panel is mounted in enclosure with metal cover and metal bottom.
  IRIS M (Model: PRO) is designed for surface wall mounting (see item 2.2).
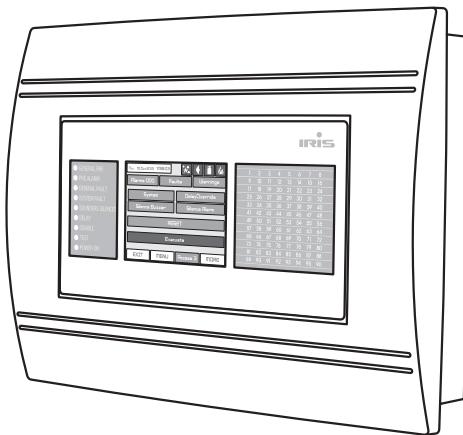
IRIS P - Front view
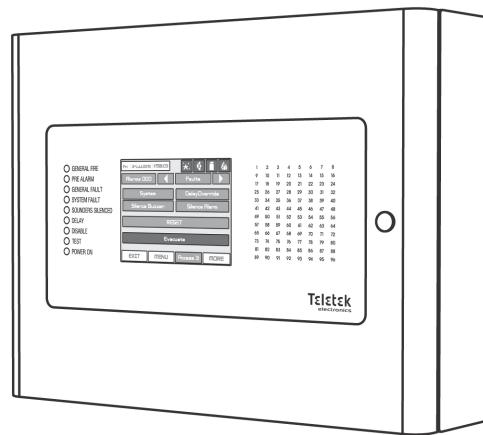
IRIS M - Front view (Model: PRO)

1.3 General Specifications

The front panel consists of graphic LCD display (dimensions 240x320) with a built-in touch screen and a light-emitting diode indication. Separate operator and engineer passwords provide access to the functions of the panel. The internal space of the box is protected with the help of secret screws for IRIS P and special key lock for IRIS M (Model: PRO).

Up to four loop controllers (IRIS TTE Loop) can be supplemented to the mother board.

The system can be expanded by connecting up to 64 fire panels IRIS to the Ethernet network, using TCP/IP for communication between them.

The panel has a built-in real time clock and calendar, allowing day and night time modes of work. Switching over between the day and night operation modes can be automatic or manual.

Events like FIRE, RESET, FAULT, etc., are saved in the memory, thereby creating an event log-file. It contains the time and date, the address of the device, the type (module, detector, sounder or periphery device), the name of the device, the zone, the name of the zone, etc.

1.3.1 General Technical Specifications
- Loops - from 1 to 4 loops
- Up to 250 devices per one IRIS TTE Loop
- Max. number of devices - 1000
- Zone Number - 96 max.
- Zone Groups* - 48 max.
- Communication protocol for IRIS TTE Loop expanders - TTE
- Monitored relay outputs - 3:
  - SND (for connecting Sounder) - 24VDC / 0.3A
  - Fire R (Fire) - 24VDC / 0.3A
  - Fire P (Fire Protection) - 24VDC / 0.3A
- Non monitored relay outputs - 5:
  - 4 programmable, 15A@24VDC
  - Fault R (Fault), 24VDC / 0.3A

> **ATTENTION: The total current consumption of outputs +24V, SND, FIRE R, FIRE P and FAULT R must not exceed 0.5A!**

- Auxiliary output (terminals +24V and GND - see item 2.3.3) - 20VA@0.3A
- Display - 320x240 CSTN graphic display (118.8 x 89.38 mm) with a touch panel
- Real time clock
- Up to 250 programmable Inputs/Outputs per panel
- Comprehensive day/night mode facility
- 2 Steps of alarm levels (T1 and T2)
- Based on Windows graphical configuration utility via Ethernet or USB
- Simple Http monitoring utility
- Loop less and Output less panel option (repeater)
- Thermal printer (optional)
- Multi- language support
- Easy software update
- Certified according EN54-2/4

* Not EN54-2 compliant

1.3.2 Working Environment
- Working Temperature:...-5˚C up to +40˚C
- Relative Humidity: ....up to 95% (without condense)
- Storage Temperature: ....-10˚C up to +60˚C
- Weight (without the battery): ....6kg.

1.3.3 Electrical Specifications
- Cable..4-wire
- Cross section ....0.25mm^2
- Max. distance long ....up to 1000m

Earth connection

The earth connection has to be realized in accordance with the rules for the electrical safety with the total resistance in the circuit lower than 10Ω. It is mandatory to connect the earth connector of the main power supply cable to the middle input of the fire panel terminal and check the connection to be tight and stable - see *item 2.3.7 Main Power Source.*

Main power supply

In normal operating conditions the fire panel is powered from the mains voltage line. In case of mains voltage line loss the fire panel is equipped with one rechargeable battery. The characteristics of the main power supply are as follows:
- Main Power Supply: ....~230VAC +10% / -15%
- Frequency: 50/ 60Hz
- Max. continuously output current Imax.a: 2.7A
- Max. output current without battery charging Imax.b: 5.0A
- Min. output current Imin: 0.2A
- Voltage output (U): ....from 10.2V up to 14.3V (typical 13.65V @ 20ºC)
- Electrical output:
  - To the panel 5A
  - To the battery (Charging current "I").......................2A

Consumption

From the main power supply in standby mode:
- For 1 loop configuration: ....65 mA AC
- For 2 loops configuration: ....75 mA AC
- For 3 loops configuration: ....85 mA AC
- For 4 loops configuration: ....95 mA AC

From the backup power supply in FAULT mode and generated message "AC loss":
- For 1 loop configuration: .... 285 mA DC
- For 2 loops configuration: .... 360 mA DC
- For 3 loops configuration: .... 435 mA DC
- For 4 loops configuration: .... 510 mA DC

Battery Power Supply
- Current output (I): 5A
- Internal resistance of the accumulator battery Ri .... < 0.3 Ohm
- Number of the Batteries: .... 1 x 12V/ 18Ah, rechargeable, sealed lead-acid type
- Battery Size: 167x181x76mm
- Type of the Battery connection: .... with a flat terminal lug - Ø5mm (M5)

List of the fuses
- General Power Supply: .... 2A, T Type
- Outputs: .... 0.3A, PTC Type
- Battery: .... 7.0A, PTC Type

⚠	**ATTENTION: Do not install the fire panel near power electromagnetic fields (radio equipment, electric motors, etc.)!**

List of the spare parts kit, included in the set of the fire panel IRIS:

No	Element	Description	Quantity	
			IRIS P	IRIS M
1.		Resistor 10K ±5%, 0,25W	2	2
2.		Anchor 6x30mm	4	4
3.		Fuse 2A, T type 5x20mm (for the mains power supply)	1	1
4.		Screw M4x40 Cross slot DIN7985	4	4
5.		Screw M4x30 Cross slot DIN965	2	2
6.		Screw M4,2x38 Cross slot DIN7981	4	4
7.		Washer M4 DIN522	4	4
8.		Cable tie 2,5/160mm	2	2
9.		Plastic cap (IRIS P)	21	-
10		Keys	-	2

The panel should be installed by qualified specialists only.
The electronic components of the panel are vulnerable to electrostatic discharge.
Never add or turn off components which are being power supplied!

2. INSTALLATION

2.1 Mounting IRIS P

• The panel must be installed in a clean dry place and must not be subjected to impacts or vibrations (Figure 1). It must be situated far from heating appliances. The temperature must be within -5ºC and +40ºC. The fire panel is not water-proof!

• Unscrew the two secret bolts situated above and under the box cover - see Figure 2.

• Remove the front cover as first disconnect the flat-cable for panel indication. After that unscrew the hinge bolts on the side of the front panel - Figure 3. *(Note: You can unscrew and the hinge bolts on the side of the metal box. The special here is the presence of two plastic pads situated under the hinges. The pads have to be returned back under the hinges at closing the front cover.)*

• Choose inlets for the cables, and put plastic taps on those ones which you will not use.
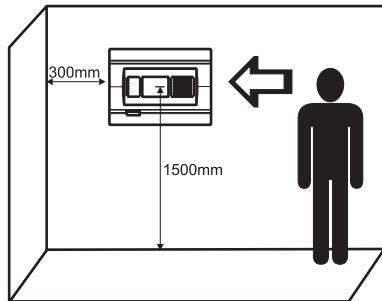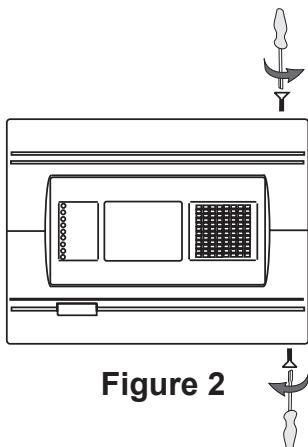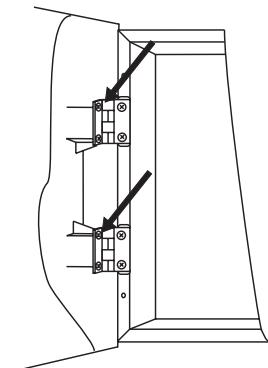
Figure 1   **Figure 2**   **Figure 3**

• Use given on Figure 4 dimensions to outline and to cut the mounting hole in the drywall.
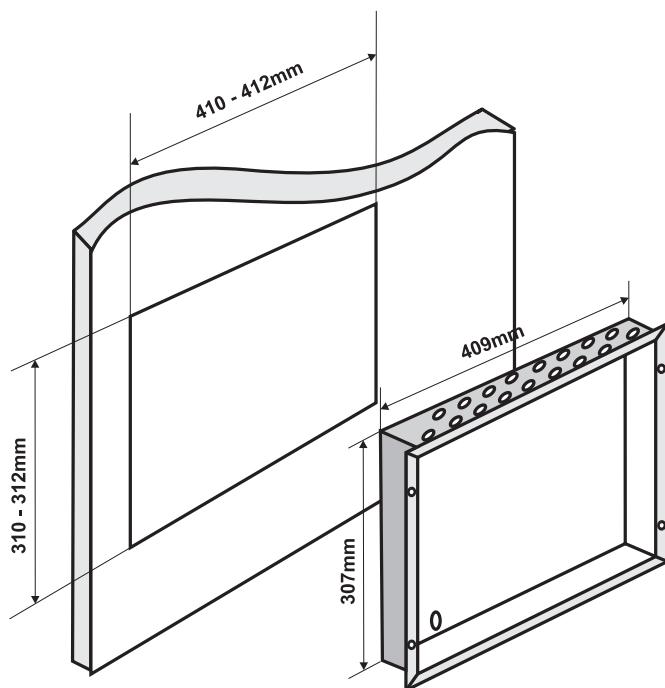
Figure 4. Dimensions of the metal bottom and the mounting hole.

• Use the accessory set containing two special hangers (see Figure 5) for mounting of the fire alarm panel on 25 mm thick drywall.
• Fix the hinges on the back side of the gypsum plaster wall with the screws M4x30 cross slot DIN965 from the supplied kit, as shown on Figure 5, Position 1.
• Route the external cables onto the metal bottom, BUT DO NOT make any connections at this stage. ENTER THE MAINS CABLE THROUGH ITS OWN CABLE ENTRY POINT AND KEEP MAINS WIRING AWAY FROM SYSTEM AND OTHER LOW VOLTAGE WIRING.
• Place the metal bottom in the mounting hole and fix as use the washers M4 DIN522 and the screws M4x40 cross slot DIN7985 - Figure 5, Position 2.
• Connect the mains supply and earth wire to the power supply terminal and make sure that the connections are tight and stable (see Figure 17) BUT DO NOT apply the main electrical supply at this stage.
• Position the accumulator battery in an upright position and fix the metal clamp - Figure 10.
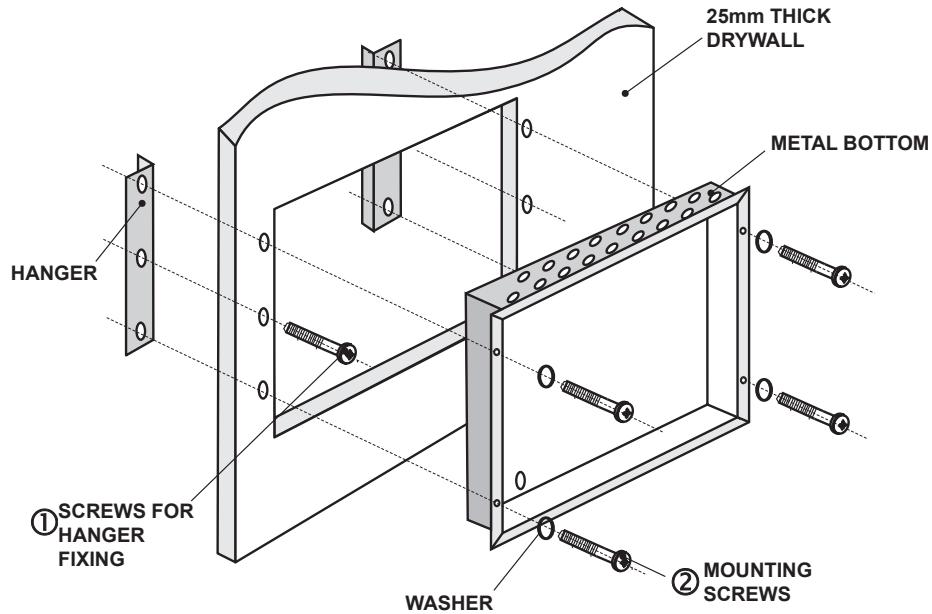
Figure 5. Action sequence for mounting.
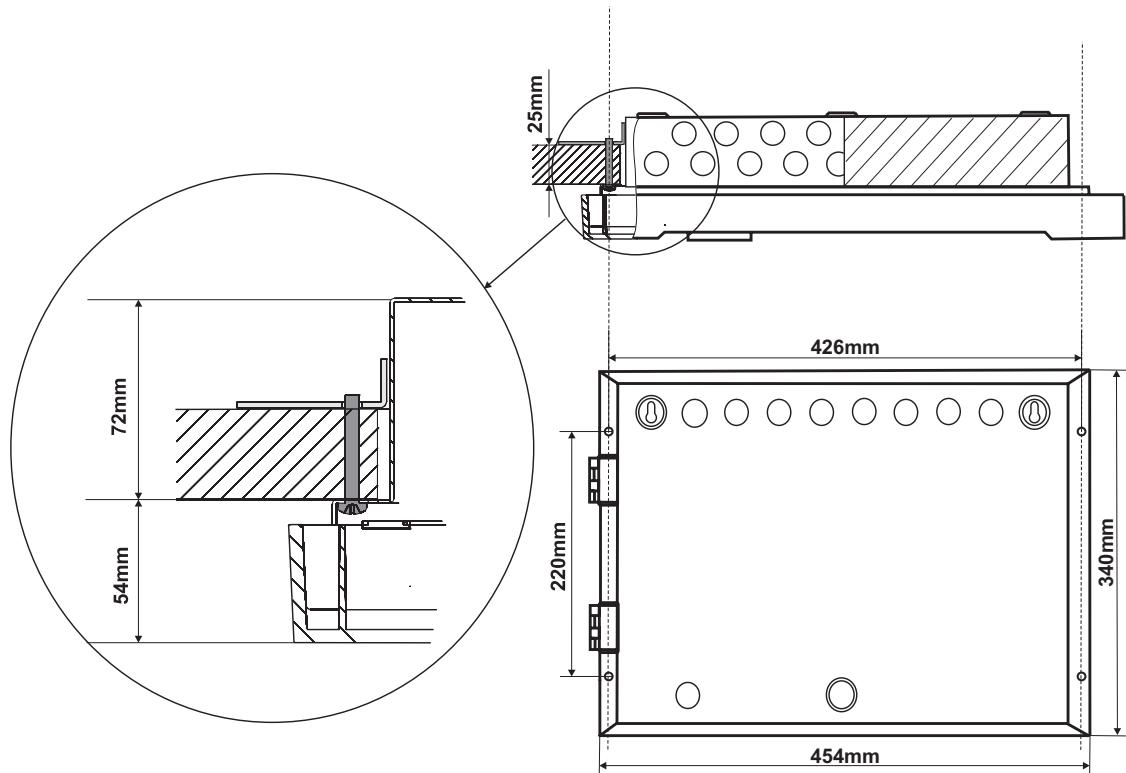
Figure 6. Mounting holes.
Main view of the fixed to the wall hinge and the bolts supporting the metal bottom.

2.2 Mounting IRIS M (Model: PRO)

• The panel must be installed in a clean dry place and must not be subjected to impacts or vibrations (Figure 7A). It must be situated far from heating appliances. The temperature must be within -5ºC and + 40ºC. The fire panel is not water-proof!

• Open the front cover. **Attention:** The cover is mounted to the box bottom with hinges fixed with dismountable rivets. The angle of opening of the front cover must not be greater than 110° - Figure 7B!
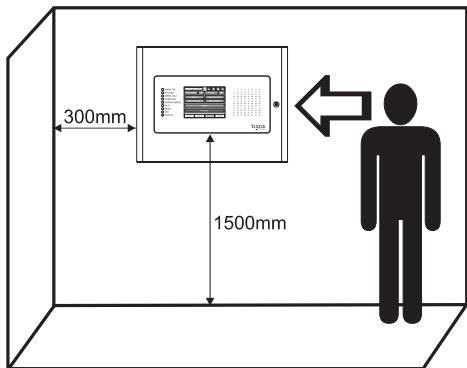
Figure 7A
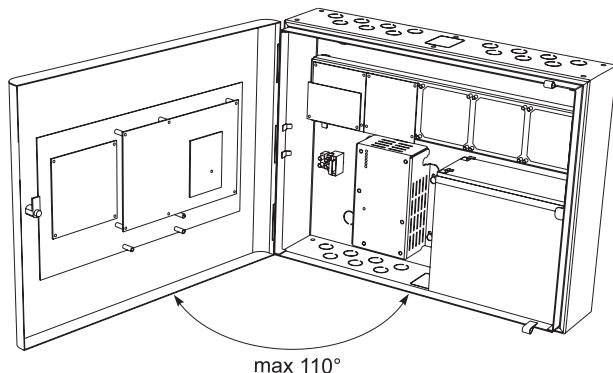
Figure 7B

• Perform wall mounting as using the drilling paper template and fix the box bottom with the supplied anchors and mounting screws.
• Choose inlets for the cables for the main power supply cable, loops, sounders, control devices, etc. Remove the metal cap element just from those holes for cable running (Figure 8).
• Route the external cables onto the metal bottom, BUT DO NOT make any connections at this stage. ENTER THE MAINS CABLE THROUGH ITS OWN CABLE ENTRY POINT AND KEEP MAINS WIRING AWAY FROM SYSTEM AND OTHER LOW VOLTAGE WIRING.
• Connect the mains supply and earth wire to the power supply terminal and make sure that the connections are tight and stable (see Figure 17) BUT DO NOT apply the main electrical supply at this stage.
• Position the accumulator battery in an upright position and fix the metal clamp - Figure 10.
• When you finish with power up and testing steps and the panel is in normal operation mode close and lock the front cover with the keys.
• Keep the keys in a safe place and authorised access of technical personnel only.

Figure 8:
Elements of IRIS M (Model: PRO) enclosure
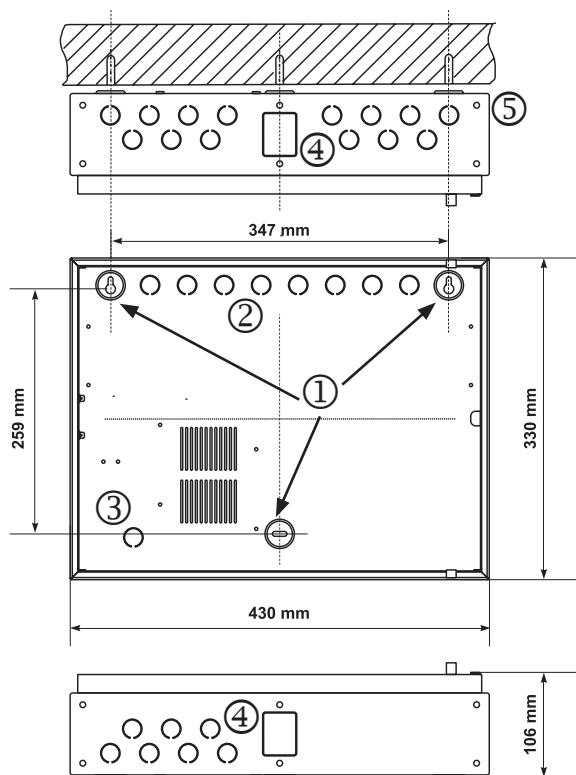
1 - Main mounting holes
2 - Holes for cable running
3 - Hole for main power supply cable running, protected with a metal cap element
4 - Additional holes for cable running, protected with a metal cap element
5 - Ø 5mm openings (4 on upside and 4 on downside on the box bottom) for fixing the panel to other boxes from the same type

2.3 System components
2.3.1 Front panel

LED indication of the events

LED indication of the zones in fire mode

LCD-display (320x240)

LED-indication of the events provides following functions:
GENERAL FIRE - General FIRE Indication
PREALARM - Indication for zones in Pre-Alarm Condition
GENERAL FAULT - General FAULT Indication
SYSTEM FAULT - General SYSTEM FAULT Indication
SOUNDERS SILENCED - General Indication for Silenced Sounders
DELAY - General Indication for Active Delay in any of the Outputs
DISABLE - General Indication for introduced Disability
TEST - General Indication for Test
POWER ON - Presence of power supply

Figure 9.
Main view of the front panel.

2.3.2 Configuration of the basic modules
The configuration of the elements is the same for the both panel versions IRIS P and IRIS M (Model: PRO).

A slow type fuse 2A situated into the terminal.

Earth point

Terminal for connection between the mains power supply and the power source.

Output Module

4 Relay Module

Loop Controller 1

Loop Controller 2

Loop Controller 3

Loop Controller 4

Power Supply Unit

Accumulator Battery 12V / 18 Ah

Metal clamp for supporting the battery*.

Mains power supply opening.
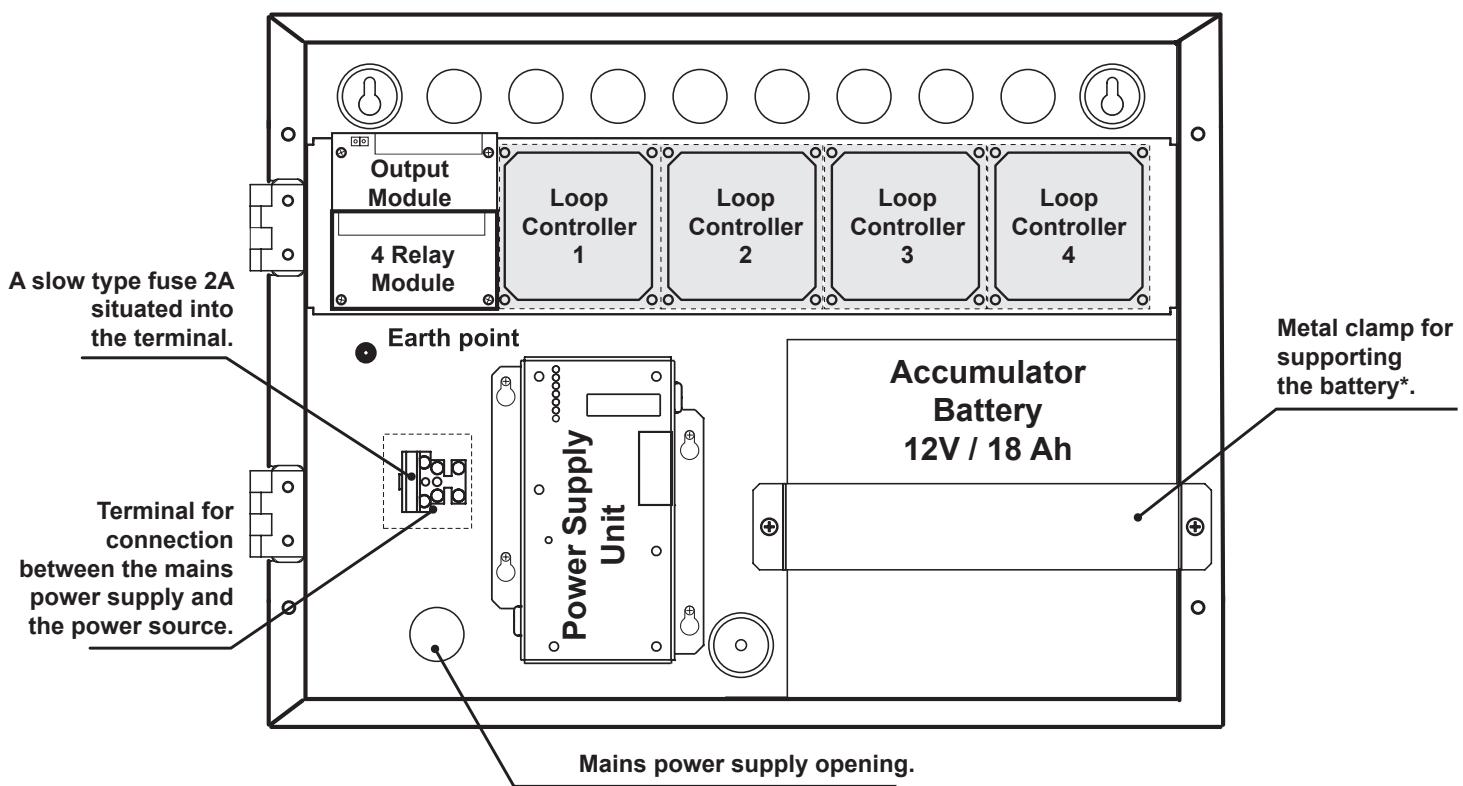
Figure 10. Configuration of the basic modules in IRIS P and IRIS M (Model: PRO) panels.

* Note: The metal clamp for the battery is situated vertically in IRIS M (Model: PRO) panel.

The configuration of the elements is the same for the both panel versions IRIS Repeater P and IRIS Repeater M.

A slow type fuse 2A situated into the terminal.

Earth point

Accumulator Battery 12V / 18 Ah

Metal clamp for supporting the battery.

Power Supply Unit

Terminal for connection between the mains power supply and the power source.

Mains power supply opening.
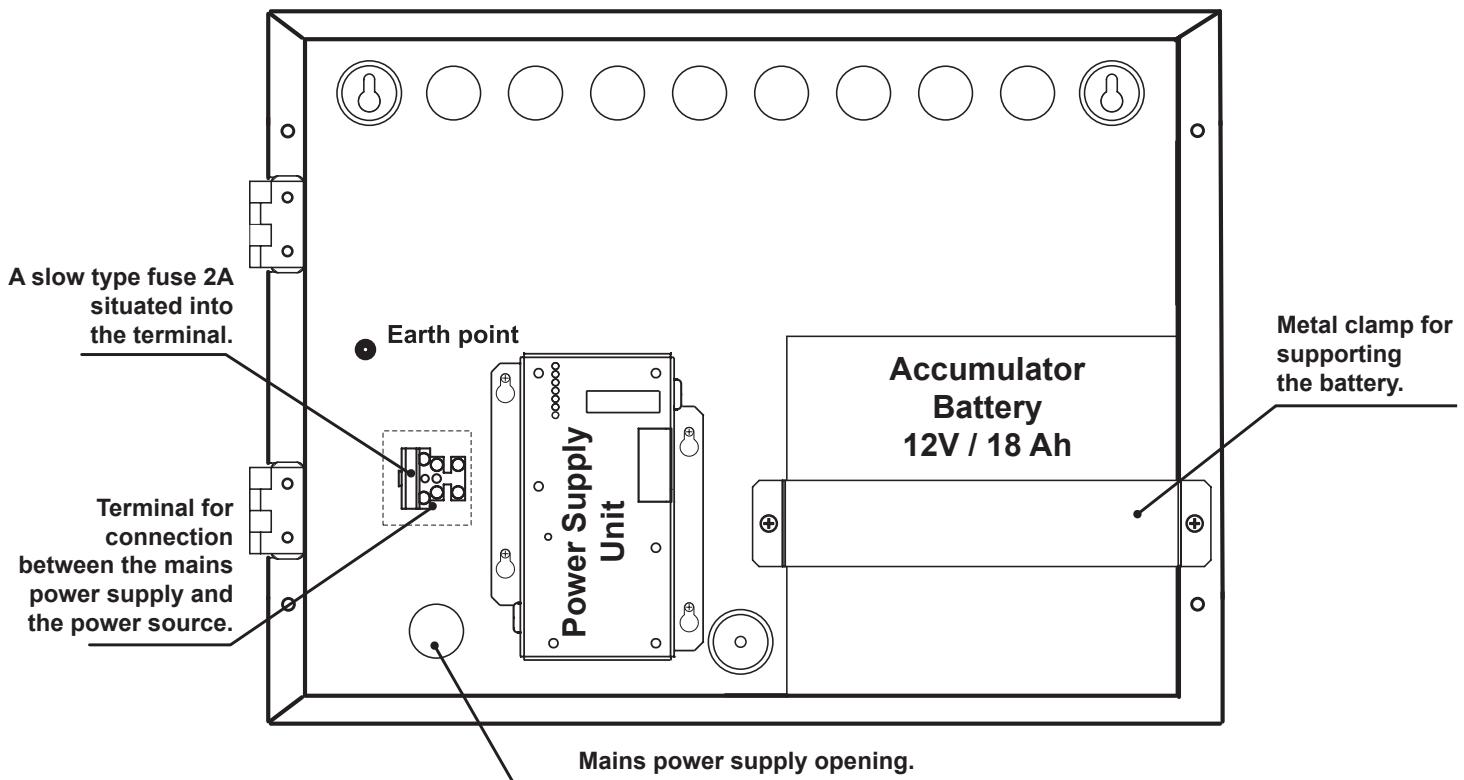
Figure 10A. Configuration of the basic modules in IRIS Repeater P and IRIS Repeater M panels.

2.3.3 Output Module and 4 Relay Module

The Output Module (Figure 11a) is a basic part of the fire panel IRIS, see the description of the terminals below.
The 4 Relay Module is integrated onto the Output Module and has 4 relays with programmable relay outputs.

> ⚠ **ATTENTION: The Output module could not work independently.**
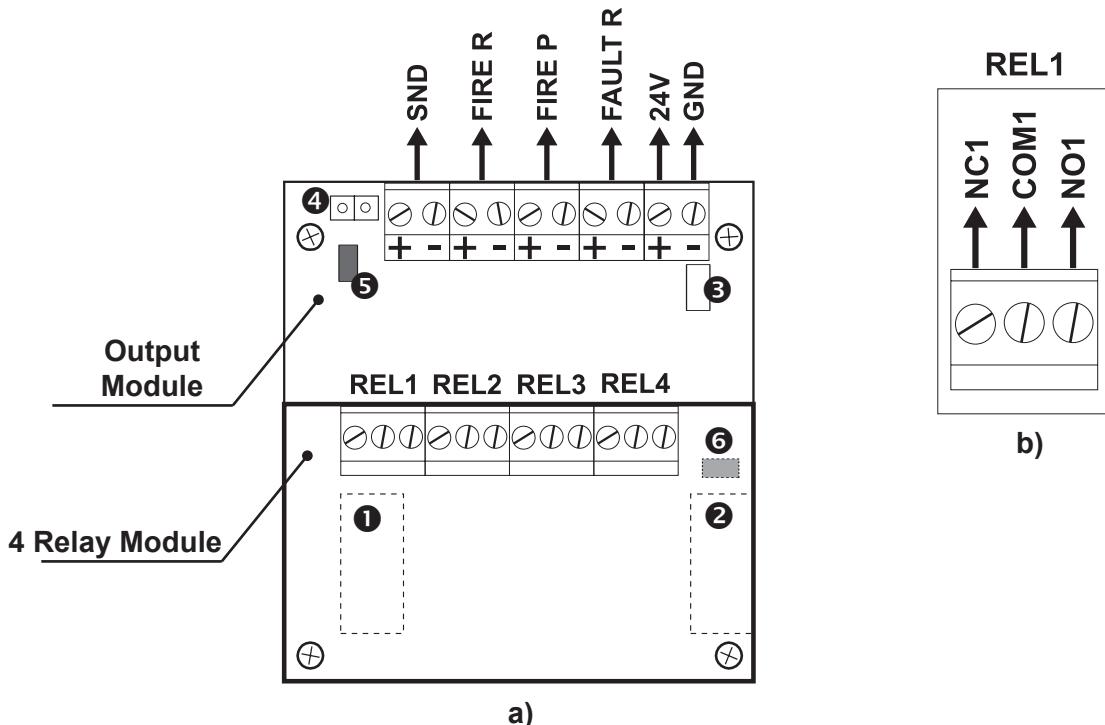
Figure 11. Output Module with integrated 4 relay module.

Description of the Output Module terminals:

- **+24V** - DC Auxiliary outputs, 20 VA @ 0.3A;
- **GND** - Common earth
- **SND** - Monitored output for connecting of a sounder, 24 VDC / 0.3 A;
- **FIRE R, FIRE P -** Monitored outputs for connecting of auxiliary devices (e.g. signalling devices), 24V / 0.3A. These outputs are activated in case of a fire alarm condition.
- **FAULT R** - Non monitored output for connecting of auxiliary devices, 24V / 0.3A. This output is deactivated in case of system trouble or fault.
- ❶ - Ribbon cable interface connector to the front panel (on the back side of the Outputs Module);
- ❷ - Interface connector for connecting Loop Expander Module (on the back side of the Outputs Module);
- ❸ - Fuse 0.3A, type Resettable (on the back side of the Output module);
- ❹ - Jumper for enable/disable indication for earth fault (JPEF). *For example, if you want to enable the earth fault indication set a jumper on position 4.*
- ❺ - LED (green) – Indication for data transfer between the main microprocessor of the panel and the Output Module. In normal operation mode is constantly blinking.
- ❻ - LED (red) – Indication for power supply of the Output Module. In normal operation mode is constantly lighting on. The LED is under the 4 Relay Module.

ATTENTION: The total current consumption of outputs +24V, SND, FIRE R, FIRE P and FAULT R must not exceed 0.5A!

Description of the 4 relay module terminal:

- **REL1, REL2, REL3 and REL4** - Programmable volt free change over relay contacts each, 24VDC@15A. Each relay has one NO (normal open) and one NC (normal closed) contact with common lead on a terminal. When a relay output is activated the NO contact is closed and the NC contact is opened - see Figure 11b.

2.3.4 Connecting devices to the Outputs Module

> ⚠ **The outputs SND, FIRE R, FIRE P and FAULT R, at activation, provide 24VDC@0.3A to the load.**
> **It is necessary to connect in parallel to the last device in the loop a 10k terminate resistor, so to ensure that the panel is able to detect any break or short circuit in the loop - see Fig. 12.**
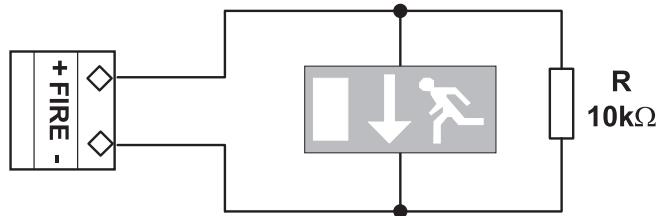
Figure 12. Example for connecting of end device (an illuminated exit sign) to the Monitored FIRE Output.

To the monitored output **SND** could be connected several sounders - Figure 13. The maximum number of sounders that could be connected in the circuit, depends on their total current consumption, which must not exceed 0.3A.
Before connecting the last sounder in the circuit, parallel to it **must be added** resistor 10k.
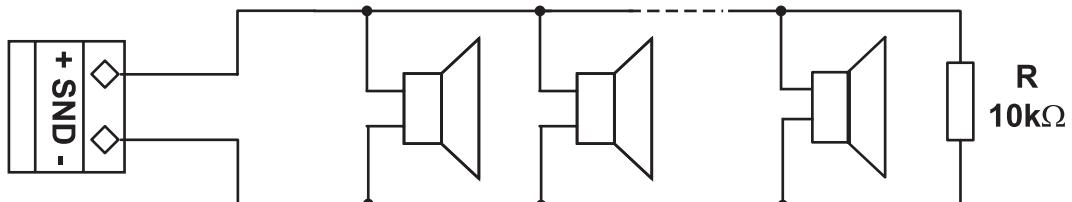
Figure 13. Connecting of sounders.

2.3.5 Loop Expander

The IRIS fire panel operates with IRIS TTE Loop Controllers (*Teletek Electronics communication protocol*).

The Loop Controller (Figure 14) realizes the connection between the Output Module and devices connected to the communication line. The Loop Expander has two basic functions: 1. Gathers data from the devices in the communication line and transfers it to the Output Module; 2. Receives commands from the Output Module and transfers them to the devices connected in the communication line.

Every IRIS TTE Loop provides up to 250 devices.

The maximum current consumption of the devices in the communication line in alarm state must not exceed I_{max} = 500mA. If the consumption exceeds this value an over-load protection would be turned on.

In the configuration of analogue-addressable fire panel IRIS could be mounted up to 4 loop controllers.
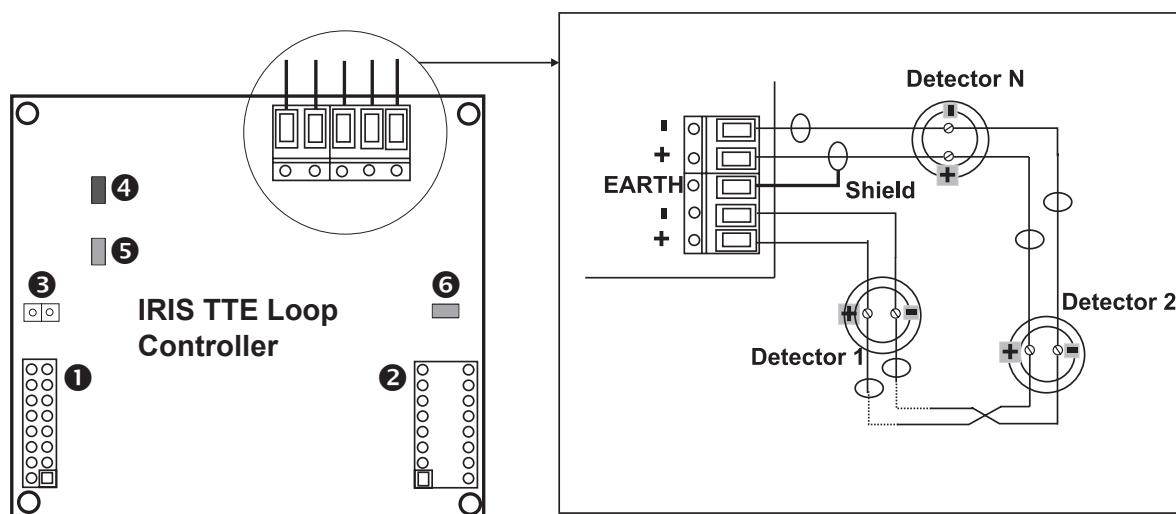
Figure 14. General view of IRIS TTE Loop and an example for connecting devices to it.

Description of the IRIS TTE Loop Controller:
❶ - Interface connector for connecting the Loop expander to the Output Module.
❷ - Interface connector for connecting second loop expander.
❸ - Jumper for enable/disable indication for earth fault (JPEF). *For example, if you want to enable the earth fault indication set a jumper on position 3.*
❹ - LED (green) – Indication for data transfer between the main microprocessor of the panel and the IRIS TTE Loop. In normal operation mode is constantly blinking.
❺ - LED (red) – Indication for scanning the devices connected to the Loop controller. In normal operation mode the LED lights on continuously in 10 seconds intervals.
❻ - LED (red) – Indication for power supply of the Loop controller. In normal operation mode is constantly lighting on.

Adding of loop expander in the configuration of the fire panel IRIS

ATTENTION: DO NOT ADD OR REMOVE LOOP EXPANDERS to the fire panel configuration WHEN THE MAIN AND BACKUP POWER SUPPLIES ARE ON!
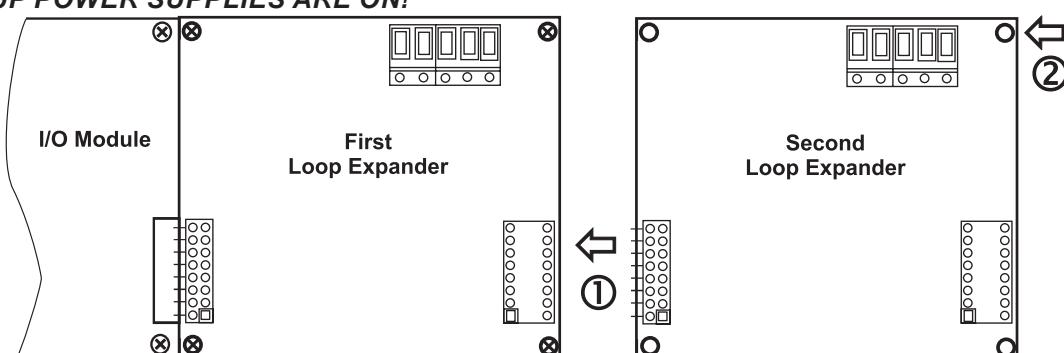
1 - Connect the interface connectors of the first and the second loop expanders.
2 - Fix the second loop expander with supplied bolts in the kit to the metal box of the fire panel.

Figure 15. Connecting of a second loop expander in the fire panel configuration.

Note: The method of adding third and forth loop expander is analogical to that shown on Fig. 15.

2.3.6 Maximum permissible cable length

The maximum length of the loop in the system could vary according to the cross-section and the ohmic resistance of the used cable.

Nevertheless, there is no specific requirement for cable description according to standard EN54-2, the manufacturer recommends using the listed cables in installations:

No	Brand	Parameters
1	Mining Ltd Fire cable AF*	Unscreened, CEI 20/22 II IEC 60332-3, GR2, C-4 (U0=400V) CEI-UNEL-36762, $2x0.8mm^2$
2	BERICA CAVI S.P.A ITALY MULTICORE FLEX SCR	Screened, CEI 20/22 II CEI EN 60332-1-2, CL 5 CEI EN 60228 VDE 0295, 300/500V, $2x0.5/0.75/1.0/1.5\ mm^2$
3	TEKAB FireTEK, SA7Z1, ZA7Z1, MZA7Z1	Screened, C/W BS 6387, Class-1/Class-2 BS 6360, 300/500V, $2x1.0/1.5/2.5\ mm^2$
4	Atron ACFF	Screened, IEC332,2, $2x1.0/1.5/2.5\ mm^2$
5	Atron ACFR	Screened, IEC332,2, $2x0.8\ mm^2$
6	Atron PIROFREN SOZ1-K	Screened, PH90 DIN EN 50200 TS IEC 60331-2, 300/500V, $2x0.8/1.5\ mm^2$

This cable is tested and approved.

> ⚠ **ATTENTION: TTE loop controller supports up to 250 devices!**

To ensure the correct operation of the system is necessary to make some calculations in advance:

1. To ensure the ability of the fire panel to receive the signals from the devices in the loop, calculate:	**2.** To ensure the ability of the fire panel to recognize the double addresses in the system, calculate:	**3.** To ensure the ability of the devices in the loop to receive command signals from the panel, calculate:
$$L_{C1max} \leq 123\ /\ R_C$$	$$L_{C2max} \leq 62\ /\ R_C$$	$$L_{C3max} \leq (12\ /\ I_{max} - R_i)\ /\ R_C$$

Where:

L_{C1MAX} , L_{C2MAX} and L_{C3MAX} - are maximum permissible length of the used cable, [km];

R_C - is total ohmic resistance of the two wires of the used able; its value shows the magnitude of the cable resistance at length 1km [Ω/km];

R_I - is the total resistance of the isolator modules in the loop;

I_{max} - is the maximum current consumption in the loop in alarm condition - total amount of the current consumption of all devices in alarm state** in the loop.

*Note: In case of using more than 15 devices SensoIRIS series from type MC-D, T110/ T110 IS, S130/ S130IS, M140/ M140IS, MCP150 and MC-Z, in calculation of I_{max} value is used the maximum current consumption in alarm state** only for those 15 devices with the highest consumption, and for the rest devices is used the consumption in stand-by mode**.*
** For the max. current consumption in alarm state and the consumption in quiescent state with communication (stand-by mode) of a device refer to its installation manual.

L_C is the necessary length of the cable for the loop.

After calculating, the maximal length of the cable is determined according:

　· If $L_C \leq L_{C2max}$ and $L_C \leq L_{C3max}$ - the fire pane will be able to communicate with the devices in the loop and also will be able to identify the presence of double address.

　· If $L_{C2max} < L_C \leq L_{C1max}$ and $L_C \leq L_{C3max}$ - the fire panel will be able to communicate with the devices in the loop but will not be able to identify the presence of double addresses.

ATTENTION: Always calculate the maximal cable length according the mentioned above formulas!
If $L_C > L_{C1max}$ or $L_C > L_{C3max}$ - the fire panel would not be able to communicate with the devices.

The connection diagram shown on Figure 16, gives the possibility to protect devices against opening and short-circuit.

For example, short-circuit in section 2 will not influence the operation of sections 1 and 3. The isolator modules at the both ends of section 2 will isolate it, and section 1 and 3 will continue working properly, as section 1 will operate by supply from the channel "A" and section 3 - by supply from channel "B". Since the fire panel will not be able to communicate with the devices from section 2, it will generate an alarm signal for lost devices and open circuit.
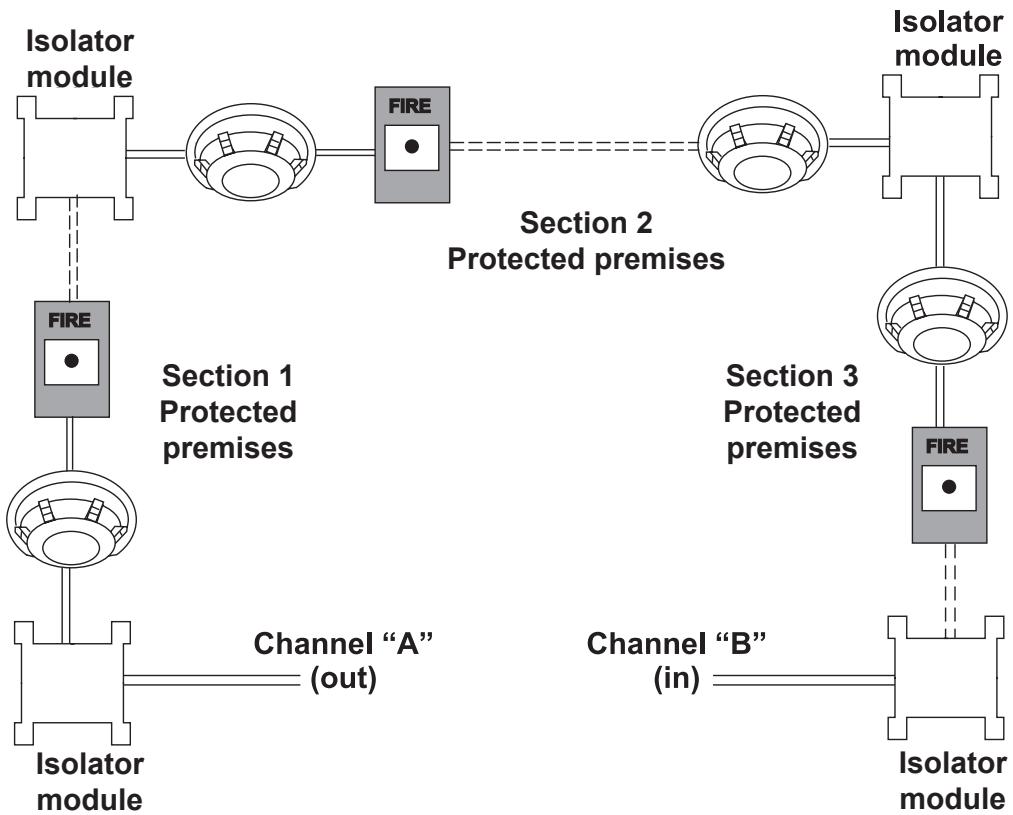
Figure 16. Example for connecting of detectors and call points to a loop expander.

⚠ **The maximum number of devices between two isolator modules is 30!**

2.3.7 Main Power Source

Figure 17. General view of the power source and the terminal.

Attention!
Check the earth connection cable before switching on the mains power supply - the connection must be tight and stable to ensure the correct operation of the panel and accurate LED indication on main power source for possible problems with earth connection of the panel.

LED-indication of the power source

LED	Function	Description
1	AC LOSS	Main power supply loss 230V.
2	Charger Fault	Problem with the battery charging.
3	BATT LOSS	Battery loss.
4	BATT Low/ Ri	Discharged battery/ High internal resistance Ri of the accumulator battery.
5	EARTH FAULT	Resistance to GND ≤ 10kΩ.
6	Rx / Tx	Shows the communication with the panel.

Terminal Block for connecting to external power supply.

Terminal	Function	Description
1	+13.8V	External power supply input.
2	FAULT IN	Input for connecting the Fault output of the external power supply.
3	FAULT OUT	Fault output, turns on when a problem with the main power supply occurred. Connect it to the input (Fault In) of the external power supply.
4	GND	Input for connecting of external power supply EARTH.

Before the mains supply is switched on, check the correct connection of each loop, sounder or any other input or output, and the earth connection cable.

2.3.8 Connecting of the accumulator battery
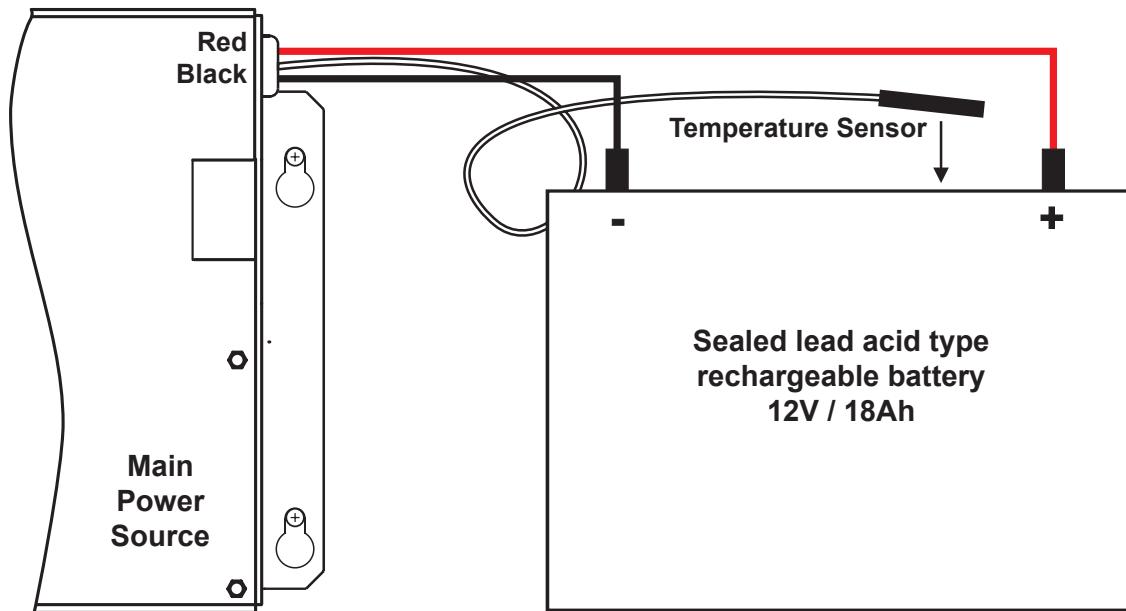
Figure 18. Connecting the accumulator battery to the main power source.

· Connect the red cable to the positive pole of the battery, and the black cable - to the negative battery pole. Both of the cables are connected to the battery by means of a flat terminal lug Ø5mm.

· Place the temperature sensor behind or under the accumulator battery to provide correct measurement the battery temperature and calculation of the internal resistance value Ri.

ATTENTION: The connection between the accumulator battery and the main power source has some special features. It is strongly recommended to use only battery with electrical characteristics and dimensions pointed from the manufacturer. Before connecting to the power source check the polarity of the battery. The battery cannot power up the panel before the mains supply has been switched on. Connect the battery after the mains supply is turned on. If the battery is new it will take a few hours before its complete charging!

The charging of the accumulator battery is done at maximum current I=2A and charging voltage U < 13.8V.

2.4 Main Board Schematics

The main board is situated on the back side of the front cover. On the main board is factory integrated a control module - uPC Module, for control of the panel functions and operations.

> ⚠ **ATTENTION: Adjustment on the main board can be done from an authorized personnel only!**
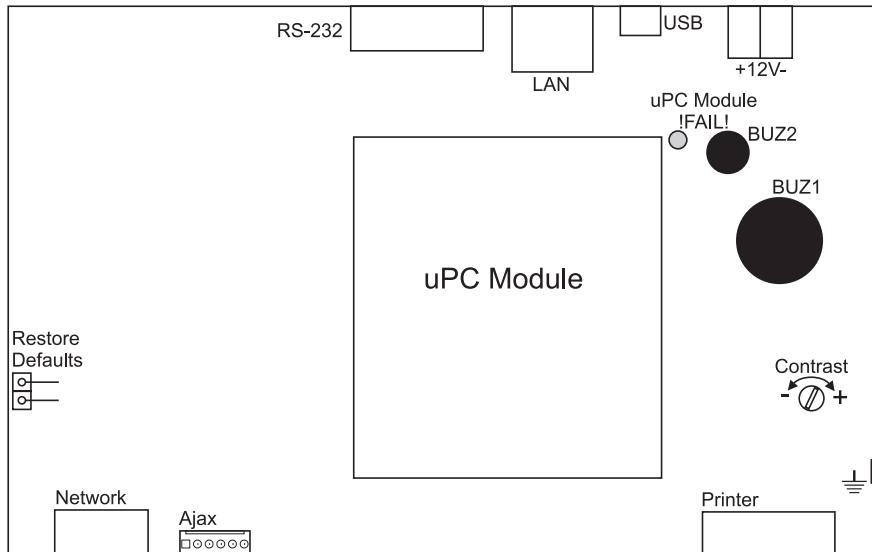
Figure 19. Main Board with integrated Control Module.

Main board elements:
- **Restore Defaults -** Resetting the panels with default parameters.
- **RS-232** - Serial interface
- **LAN** - Connecting to Ethernet network.
- **USB** - Micro USB connector for programming with ProsTE software and firmware update.
- **±12V** - Additional power supply.
- **Printer** - RS232 interface connector for connecting to a heat-printer or FAT/FBF control board.
- **Ajax** - Interface connector for adding of LAN communication module to the system configuration.
- **Network** - Interface connector for a redundant network module to the system configuration.
- **uPC Module !FAIL!** - Yellow LED for uPC failure.
- **uPC Module** - Control module integrated to the Main board
- **BUZ1/2** - Buzzers for sound signalization.
- **Contrast** - Adjusting the display contrast.

2.5 Connecting a Thermal printer

The addressable fire alarm panel IRIS is equipped with RS232 interface connector, situated in the right bottom of the main PCB, for connecting a thermal printer. The thermal printer allows the technician to print the log file for the alarm and fault events, warnings and changes during programming. The capacity of log file is 10 240 events, which are saved with date and time of occurring.

The addressable fire alarm panel IRIS supports operation with thermal printers:
  - Canon 9 type external printers, models Kafka and Datecs (EP1000), stand-alone devices.
  - IRIS Printer, situated in a metal box, suitable for building of a modular structure with IRIS M.

You can use only one printer connected to the IRIS panel.

2.5.1 Connecting of Canon type printers

For connecting the IRIS panel to Canon type thermal printer you have to prepare a special cable for the purpose – connect two male DB9-DB9 (for model Datecs printer) or DB9-DIN5 (for model Kafka printer) type connectors as shown on Figure 20.

Before printing (access level 3) make sure that the thermal printer is connected to the 'PRINTER' interface connector on the main PCB and the printer is powered on.
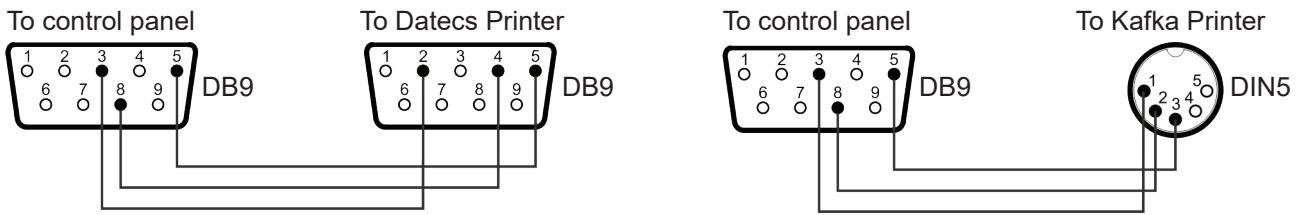
Figure 20. Cannon type thermal printer connection diagrams.

2.5.2 Connecting of IRIS Printer

IRIS Printer is situated in a separate metal box suitable for building of modular structures with IRIS M (IRIS PRO) addressable fire panel. To fix the metal boxes to each other in a structure, use the screws in the IRIS Printer spare parts kit.

The connection of IRIS panel to IRIS Printer is with a flat interface 800 mm long cable, supplied in the spare parts kit of IRIS Printer - connector types DB9 to DC10. Connect the DB9 connector to IRIS LED indication board and the IDC10 connector to the printer back side panel.

2.6 Redundant Network

(Supported for PCB Main board software rev. 4.2 and higher with LCD PCB hardware rev. 2.4 and higher)

The addressable fire alarm panel IRIS is designed with option for connection in a redundant network with other SIMPO, IRIS and Repeater panels (up to 64). The redundant network is based on RS485 interface.

2.6.1 Connecting of redundant network module

The network module PCB is mounted under the main PCB and is connected to 'NETWORK' connector – Figure 21. The card should be fixed with screws to the back side of the cover. The maximum cable length between two network modules and/ or repeater panel is 1000m.

To use the redundant module the installer must set the Network type for the panel as "Redundant" - see the item *3.7.2.1 Network Settings Menu.*

Attention: NEVER add or remove the network module to the fire panel configuration WHEN THE MAIN AND BACKUP POWER SUPPLIES ARE ON!
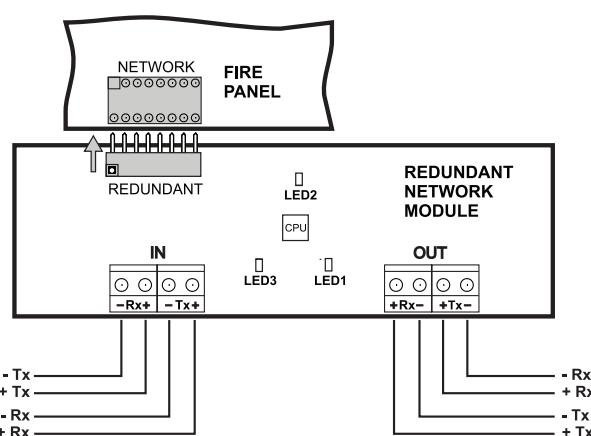
Figure 21. Connection of Redundant Network module to IRIS control panel

2.6.2 Connecting of Repeater panel

The IRIS/ SIMPO Repeater panel is a panel showing the information from the connected in the redundant network addressable fire panels IRIS and SIMPO. The repeater panel can be mounted at a remote location up to 1000m and repeats all fault and fire messages from the rest of the panels - Figure 21A.

The repeater panel is powered up from an undependable external power supply 24 VDC - Figure 21B. It is possible to power up the IRIS/ SIMPO repeater and directly from the +24V and GND terminals on the main PCB (IRIS).
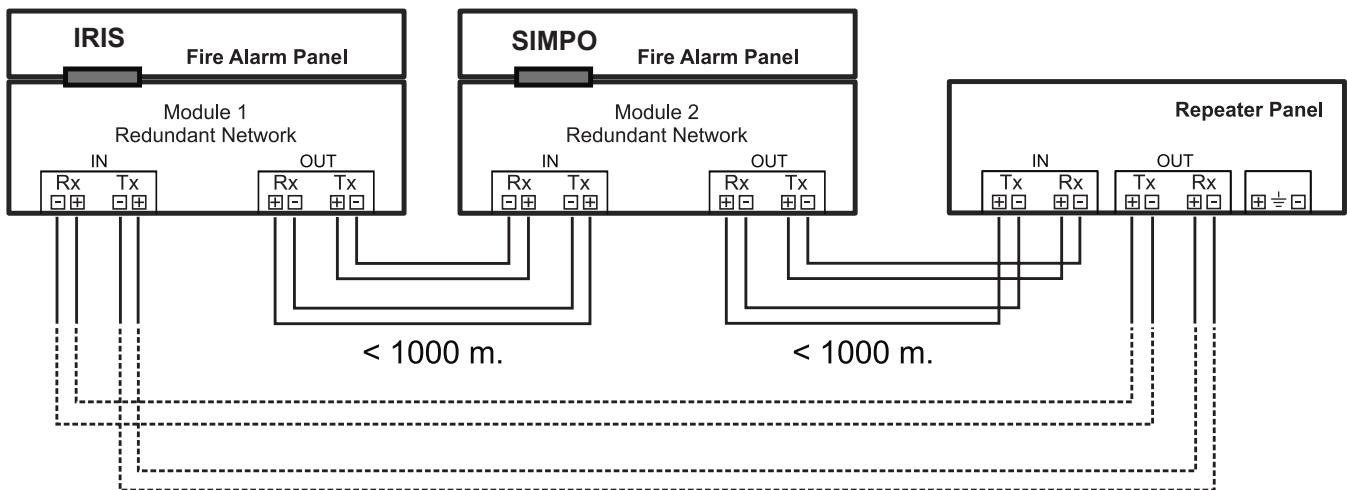
Figure 21A. Connection of Repeater panel

Up to 64 panels in a redundant network
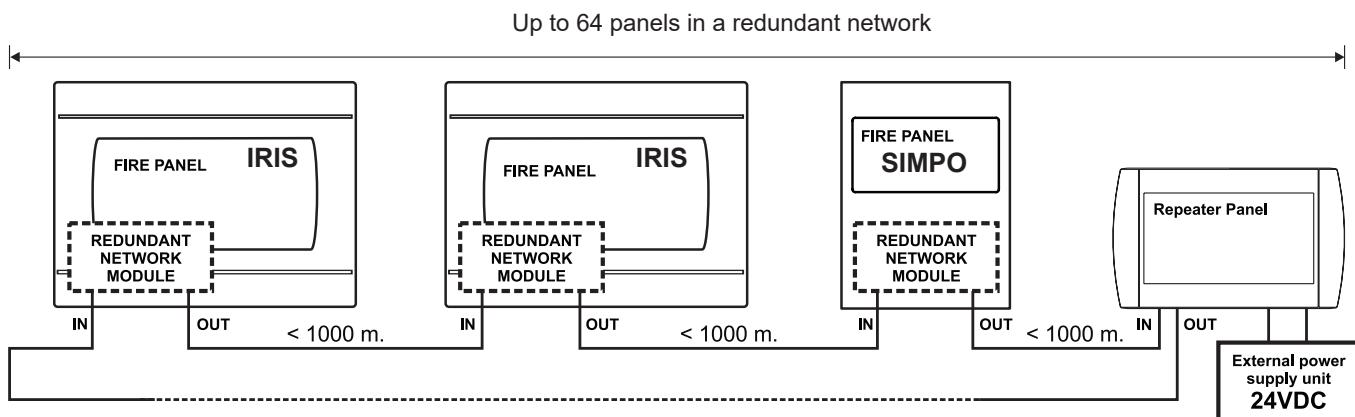
Figure 21B. General Structure (ring network topology) of panels in redundant network

2.7 LAN Network connection diagram

It is possible to connect some individual IRIS fire panels in a LAN network by means of a HUB and TCP/IP protocol - Figure 22. A supervisor PC, which could follow the current status of the individual fire panels, monitors the current panel state.

To use the LAN module the installer must set the Network type for the panel as "LAN" - see the item *3.7.2.1 Network Settings Menu.*
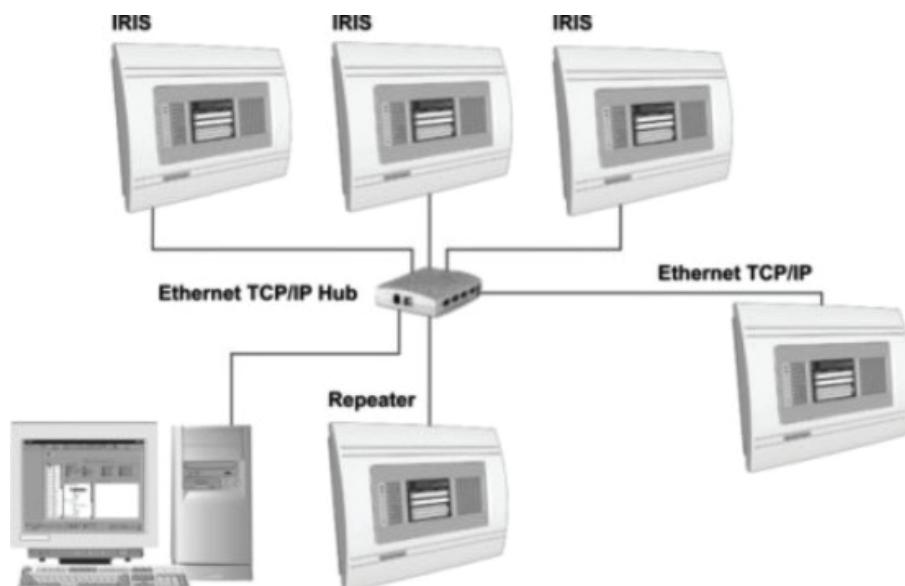
Figure 22.

2.8 Connecting to FAT/FBF (German Fire Brigade Panels)

The IRIS addressable fire alarm panel can be used in systems for announcing a fire brigade unit for a fire alarm situation in the protected site. Such systems are mainly used in Germany, as the fire panel is connected to FAT/FBF (Fire Brigade indication panel with integrated Fire Brigade operation panel) type control panels via standard serial interface.

The general system configuration, according the German standards, includes: Fire alarm panel, FAT/FBF control panel, Dialer - (GSM, GPRS, PSTN or similar transmission equipment), key safe and adapter box for the key safe.

2.8.1 Compatible German Fire Brigade Panels - Schraner

FAT-KÜ - German Fire Brigade Control and Indicator Panel (Feuerwehr-Anzeigetableau combined with a Feuerwehr-Bedienfeld). A red metal housing (dimensions 360 x 250 x 60 mm) with a door. A key is required to open the door, which has a Plexiglas ahead of the front. It has cable inlets on the back side and is intended to be wall mounted. The function, Display information, LED indicators and push buttons on the front are in accordance with DIN 14661 / 14662. The front's designation texts are in German. The FAT-KÜ must be connected to a redundant network created by the SM3-RM redundancy module to guarantee the correct operation with IRIS fire alarm panel.

2.8.2 Block Diagram
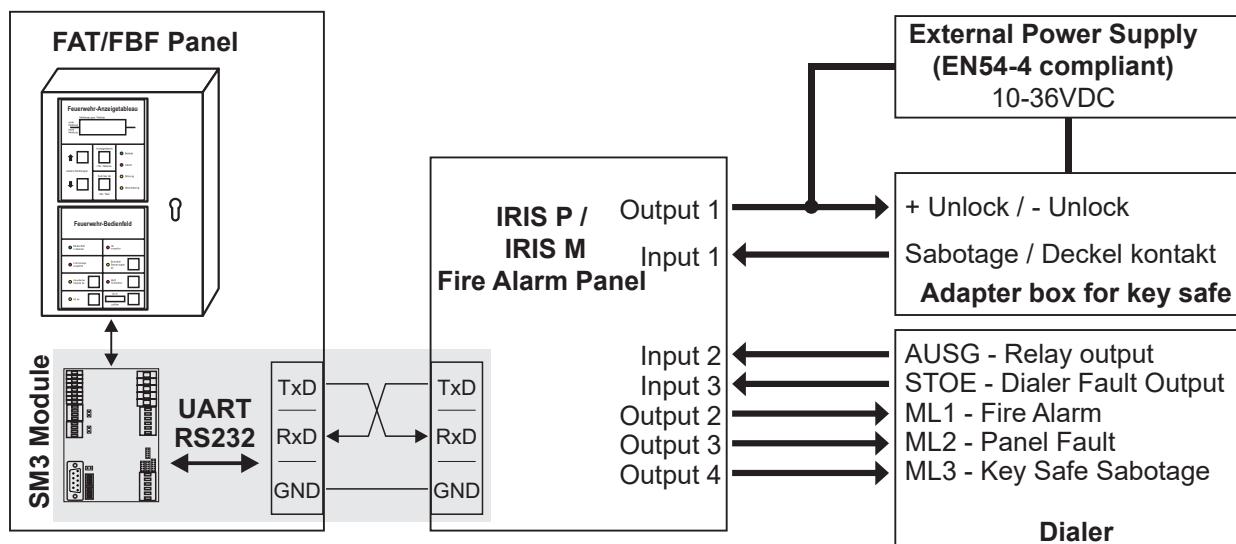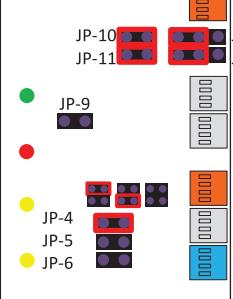
Notes:
• *The connections between IRIS fire panel and the adapter box for key safe, and the Dialer are realized using the addressable modules with inputs and outputs (MIO22, MIO22M, MOUT, MINP, MIO04, MIO40), as for the outputs can be used also the panel's programmable relay outputs - Figure 11.*
A different combinations are possible according the system configuration - see also the example at item 3.7.8.2.
• *The programming of the inputs and outputs controlling the operation of the adapter key safe and the dialer are described at item 3.7.8.4 (Menu Printer).*
• *The serial interface cable is equipped with one male DB9 connector, wired according the diagram below, and connected to the "Printer" connector on the indication board (Figure 19).*
• *A jumper must be set on the top position of the JP-4 terminal.*

The UART connection is realized between IRIS fire panel and SM3 redundancy module. The internal connection between the redundancy module and FAT/FBF fire brigade panel is presented below.
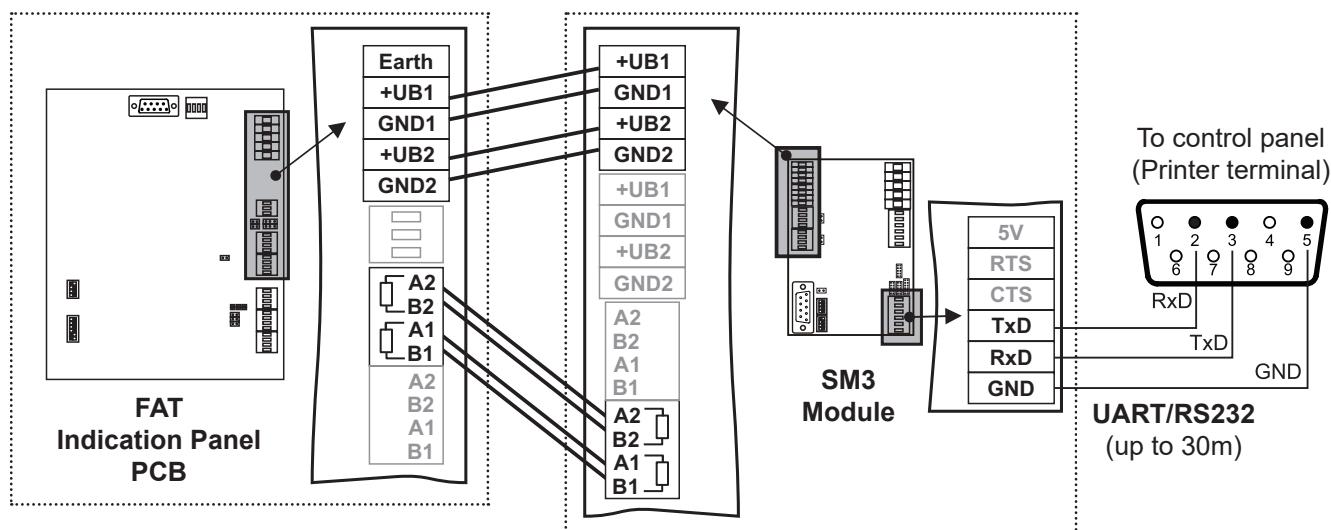
For the correct operation of the system configuration with IRIS panel is obligatory also to set the DIP switches and jumpers of the FAT indication panel and SM3 redundancy module in the following way:

FAT Panel		SM3 Module	
DIP Switches	Jumper settings	DIP Switches	Jumper settings

Note: The detailed description and documentation for FAT-KÜ control panel, SM3-RM module and other suitable products is available at the site of the manufacturer - https://www.schraner.de

2.8.3 General Description

The performed above configuration of IRIS and FAT/FBF control panel is realized at the protected site. In case of a fire alarm situation the dialer sends an alarm signal to the Fire Brigade Unit. The Fire Brigade Unit receives the signal and confirms it (via a special switch installed at Fire Brigade Site, according German standards*). The IRIS panel receives the signal from the Fire Brigade and unlocks the adapter box with key safe. (The key safe keeps all the keys for the rooms in the protected site.) The Fire Brigade Officer unlocks the key safe (with own key) and takes all the keys for the rooms. When the fire is extinguished, the Fire Brigade Officer returns all the keys back to the key safe and locks it. Now the IRIS panel must be reset to normal operation mode. After resetting, the adapter of the key safe is locked, the Dialer is returned to stand-by mode, and all of the messages for alarms and warnings are cleared.

* For detailed information about the system requirements according the German standards and the operation of IRIS panel connected to FAT/FBF (Fire Brigade Indication and Operation Panel) you can ask your distributor.

2.9 Connecting to Voice Evacuation Panels (PASO)

(Supported for PCB Main board software rev. 6.2 and higher with LCD PCB hardware rev. 2.4 and higher)

The addressable fire alarm panel IRIS is designed with option for connection to PASO specialized panels for voice evacuation and/or sound management systems. The connection is realized via Evacuation Voice Module mounted under the main PCB and connected to 'NETWORK' connector – Figure 23. The card should be fixed with screws to the back side of the cover. Up to 5 PASO panels can be connected to the Evacuation Voice Module - Figure 24.

To use the Evacuation Voice Module the installer must set the Network type for the panel as "Voice EVAC" - see the item *3.7.2.1 Network Settings Menu.*

Attention: NEVER add or remove the Evacuation Voice Module to the fire panel configuration WHEN THE MAIN AND BACKUP POWER SUPPLIES ARE ON!
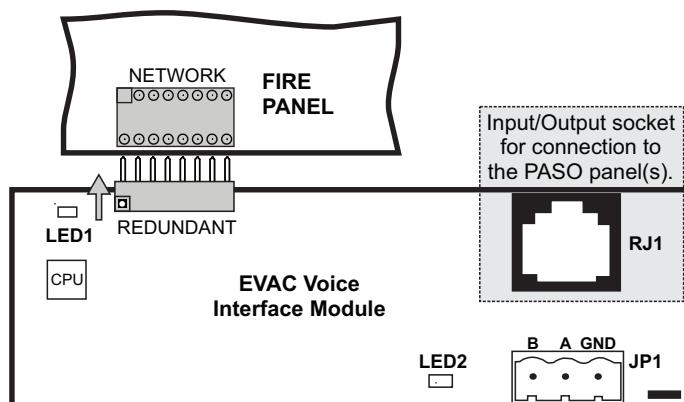
Figure 23. Connection of Evacuation Voice Module to IRIS control panel

The communication is based on RS485 interface.

Attention: Connection of max. 6 panels, numbered from 0 to 5, in a network (5 PASO panels and 1 IRIS panel)! IRIS panel always takes the last number in a network with PASO panels!
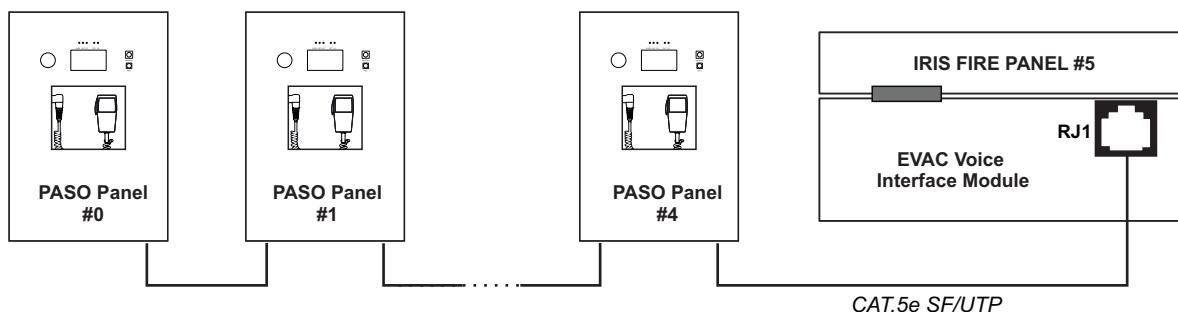
Figure 24. Connected in network PASO panels to IRIS control panel via Evacuation Voice Module

The settings for operation of the connected PASO panels are describes in item 3.7.4 Sounders Mode.

3. PROGRAMMING

3.0 Basic knowledge for operating with LCD touch-screen display

The touch-screen display of the fire panel IRIS provides easy moving down the programming menus and entering of system parameters. The access to the programming menus is done with light pressing of the desired button. You can use also and a special pen for touch-screen display.

According to the chosen menu and/or the access level there are active and inactive buttons on the screen. Choosing an active button leads to changing of the screen - you can move to a list of additional or submenus for programming, or you can enter new parameters in the system.

3.0.1 Terminology
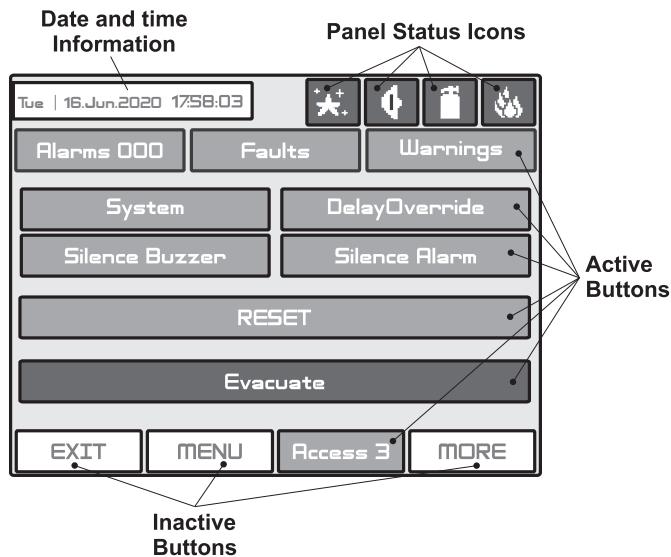
• **Active Button** - Pressing the button you can perform different operations: stop the sirens, reset the system parameters or move to other programming menus.

• **Inactive Buttons** - The buttons do not respond when pressed. The parameters definition fields are also inactive. They just provide information of the parameter type.

Note: The status of the buttons can alternatively change (active-inactive) according the programming menu and access level.

• **Panel Status Icons** - The icons give information about the status of the fire panel and the programmed working mode. The icons are inactive if pressed. The different fire panel states are indicated with different colour of the icon. The icons and their state are described in item 5.2.

• **Used symbols**

 - Press the pointed button

 - Use a special pen for touch-screen display.

3.0.2 Initial Power-up

When turned on, the panel always conducts a procedure of loading the parameters, which usually takes about 30 sec. There is no access to the menus of the panel during that procedure.

Upon the initial start up, the panel does not hold any configurations. Initialization may take several minutes. The initialization time needed depends on the number of periphery and loop devices. After the panel has been turned on, it performs a procedure for detecting newly installed periphery and loop devices - see also The **APPENDIX D**.

3.0.3 Default Language

The fire panel IRIS can support different languages of the programming menus. The factory default setting of the language is in English. You can change the language after the initial power-up as enter in sequence:

**Access 1 → 3333 → OK → System → Programming → Panel → Languages →
→ Choose a language → Apply**

After choosing the **Apply** button, you can return to the main screen by choosing the **MENU** button.

3.1 Access Codes

To access the **Programming** and **Maintenance** Menus is necessary to enter a valid access code.
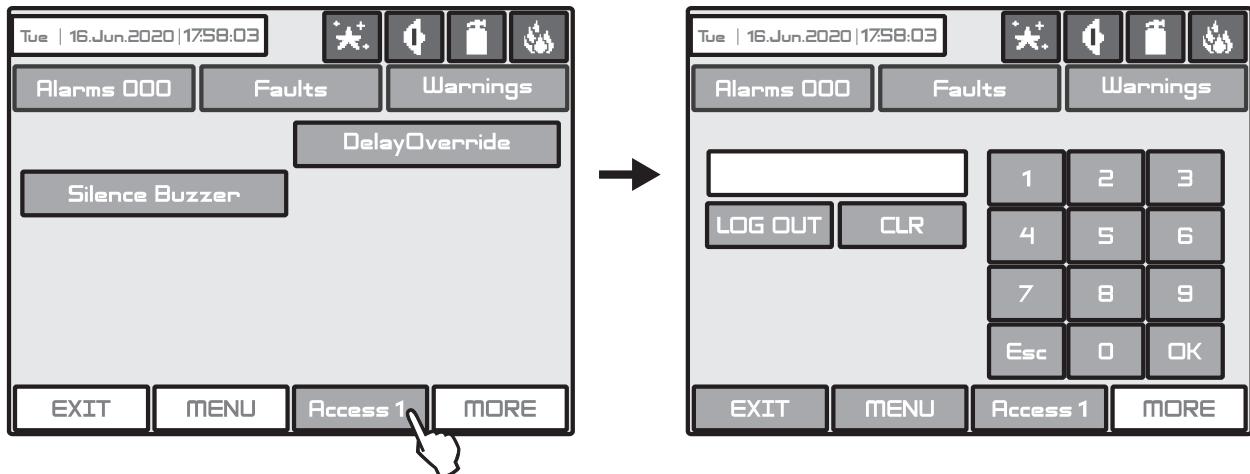
Fig. Screens 1.

There are 4 access codes programmed by default. The Installer/User can enter 3 access levels in the system. The introduced code combinations are visualized with "*" symbol.

Code Number	Code Combination (Factory set)	Access Level (Factory set)	Functions
1	0000	1	Only **Silence Buzzer** and **Delay Override** buttons are active.
2	1111	1	It is not allowed to enter the **Programming** and **Maintenance** Menus.
3	2222	2	**System**, **Delay Override**, **Silence Buzzer**, **Silence Alarm**, **RESET** and **Evacuate** buttons are active. It is allowed to enter only a few **Maintenance** Menus.
4	3333	3	**System**, **Delay Override**, **Silence Buzzer**, **Silence Alarm**, **RESET** and **Evacuate** buttons are active. It is allowed to enter both the **Programming** and **Maintenance** Menus

The entered code combination is confirmed by pressing the **OK** button. You can delete the entered digits by pressing the **CLR** button. Exit from the access level is by pressing the **LOG OUT** or **Esc** button. The other active buttons are general for all the menus and submenus and have the following functions:

EXIT - Step back to the previous menu or submenu;

MENU - Moves back to the Main Screen of the related access level.

All access codes could be viewed and edited in the "**Access Codes**" submenu based in "**Panels**" menu, see also item 3.7.1.

There are different restrictions on the panel functions in the relative access levels, which are shown in the following table:

	Function	Description	Level 1	Level 2	Level 3
Control Panel	Silence Buzzer	Deactivating Internal Buzzer	√	√	√
	Silence Alarm	Deactivating the Sounders	-	√	√
	Delay Override	Resetting of all active output delays	√	√	√
	Reset	Resetting of all active statuses	-	√	√
	Evacuate	Activating Evacuation alarm signal	-	√	√
	Alarms*	Viewing the Alarms Messages in the system	√	√	√
	Faults*	Viewing the Faults Messages in the system	√	√	√
	Warnings*	Viewing the Warnings Messages in the system	√	√	√
	Disablements*	Viewing the active Disablement in the system	√	√	√
	Tests*	Viewing the active Tests in the system	√	√	√
	Menu	Main Screen	√	√	√
	Access Level	Entering an access code	√	√	√
System — Programming	Device	Device Programming	-	√	√
	Zones	Zone Programming	-	-	√
	Inputs	Inputs Programming	-	-	√
	Outputs	Outputs Programming	-	-	√
	Panel	Panel Programming	-	-	√
	Restore Default	Restore the default parameters	-	-	√
	Save	Save the configuration	-	-	√
System — Maintenance	Time	Entering current time	-	√	√
	Date	Entering current time date	-	√	√
	Day Mode	Day Mode Schedule introducing	-	-	√
	Output Delay	Output Delay switch on/off	-	√	√
	View LOG	View the LOG-file	-	√	√
	Test	Testing	-	√	√
	Disable	Disable Introducing	-	√	√
	Software Revision	View the software revision of the main CPU	-	-	√
	Display	Calibration of the Display	-	-	√
	View Insulator Act.	Review the activated insulators in the system (modules and built-in in devices)	-	-	√

* NOTE: The menus can be reviewed at all access levels at any time regardless the system is in Programming or Maintenance mode. The menu for reviewing of Alarms in the system is always active. The menus for Faults, Warnings, Disablements and Tests are shown according the system status. In normal operation mode, when there are no active Disablements or Tests, only the buttons for viewing the Alarms, Faults and Warnings are displayed on the screen. If some Tests and Disablements are activated the rest of menus can be reviewed with the arrow buttons:
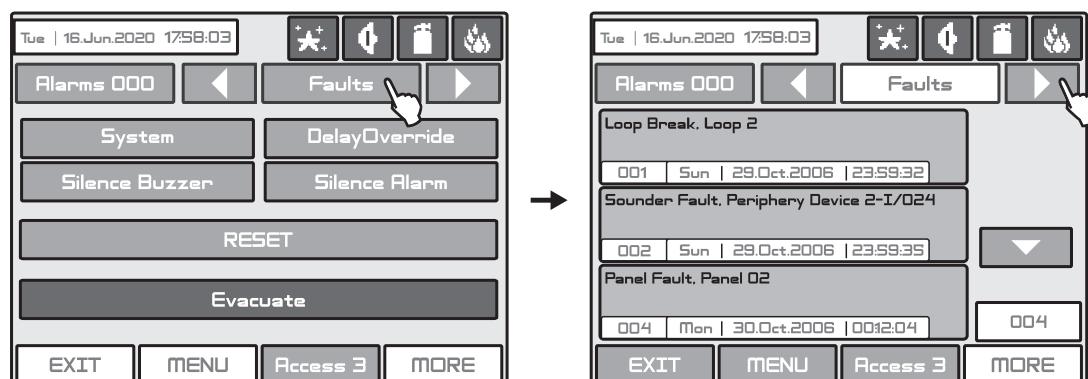
3.2 Programming Menu

The programming of the panel is done only from the access level 3 - Fig. Screens 2 (with one exception for access level 2 - the user can enable/ disable the loop devices).

Choose the **System** Button**.** From the next screen the Installer/User can choose the type of the operation, which he want to do:

      1. To program system parameters - **Programming Menu**.

      2. To study the panel operation; to enter different parameters for the maintenance of the system - **Maintenance Menu**.
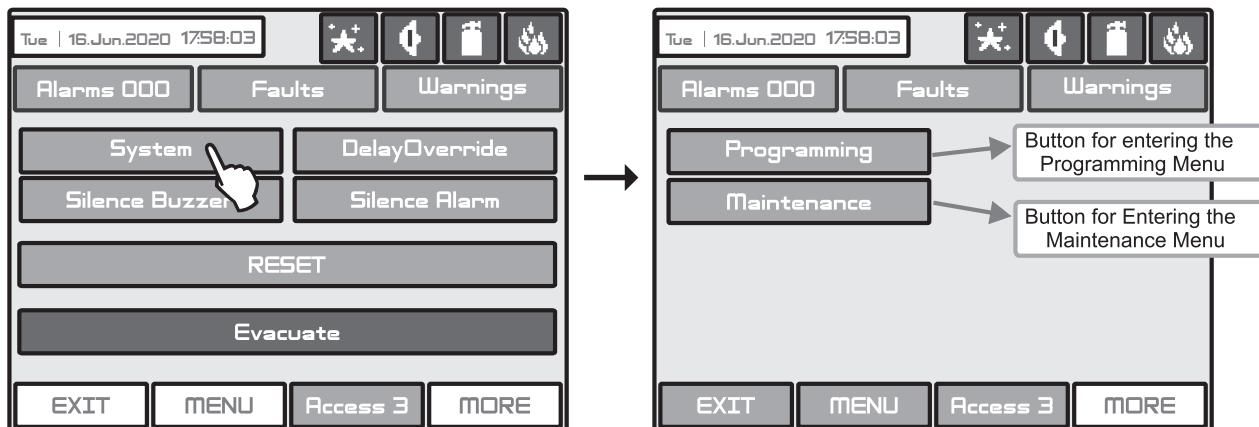
Fig. Screens 2.

To enter in the **Programming Menu** the Installer should choose **Programming** Button. The main screen of the **Programming Menu** is displayed on Fig. Screen 3:

Fig. Screen 3.

On the left side of the screen are located buttons for entering submenus for parameter programming of Devices, Zones, Inputs, Outputs and Panel Settings. To enter a desired submenu just choose its button.

Choosing the button "**Restore Defaults**" on the right side of the screen can restore all the factory settings. Button "**Save**" is for quick saving of the entered information.

> ⚠ **With the button "Exit" in the bottom left corner the user/installer can easy move one step back on the previous screen.**

3.3 Devices

The addressable fire panel IRIS supports periphery and loop devices.
All "functional modules" connected to the control panel configuration are defined as Periphery Devices, and have special programming and setting. The Main board is not a periphery device.
All addressable devices connected to loop expander are defined as Loop Devices.
With choosing the "**Devices**" button the user/installer enters a menu for choosing the type of the device:

Fig. Screen 4.

3.3.1 Periphery Devices

Choosing "**Periphery**" button leads to submenu for entering the parameters of the available periphery devices in the system configuration - Fig. Screen 5. The list of supported periphery devices is:

• **PSU** Power source - see Fig. Screen 5

• **OUT** (Output Module + 4 Relay Expander Module) - see Fig. Screen 6

• **LOOP** (Loop controller) - see Fig. Screen 7

If there is no device detected on the current address, the address is *EMPTY.*

3.3.1.1 Physical Address of Periphery Device

The panel is able to operate with up to 6 periphery devices, addressed 1 to 6. The power supply source always takes address 1, next the input/output modules are addressed. The addresses of the loop controllers are set according the order of adding to the hardware configuration.
You can choose the next/previous device address by pressing the ◄ ► navigation buttons.

3.3.1.2 Current Status of the Device

The running status of the device can be:

• **NEW** - the device is new to the system. It must be saved. The main board is recognized a physical presence of a device, which is not included in the system configuration. The new device has to be added to the system configuration so the panel to be able to communicate with it - to receive an alarm or trouble messages, to activate and to receive signals, etc. The new device can be add to the system configuration with pressing the SAVE button.

Note: The device is defined as NEW in two cases:

1. A device has been physically added to the hardware configuration of the panel. Use the "SAVE" button. (For example when a loop expander is added to the system configuration).

2. A device has been removed from the system configuration (with "REMOVE" button), but it is still present in the hardware configuration - it is not physically removed. The panel will recognize the presence of the device in the loop, but it is not added to the system configuration, so the device is NEW for the panel.

• **NORMAL** - the device is properly operating.

• **FAULT** - the device does not respond or missing. The panel periodically communicates with the peripheral devices to receive information about their current status and self-diagnostic. In case of communication failure between the panel and a peripheral device the device is considered that is in Fault condition. A Fault condition of a device can be also a physical removing of a device from the loop controller line but without removing it from the system configuration (software). That's why when a system is hardware reduced the removed devices must be "deleted" from the system configuration using the "REMOVE" button from the menu. *Note: The message for Fault condition of a periphery device is displayed with a time delay up to 60-70 sec.*

• **TYPE ERROR** - a device, different from that saved, has been detected at the respective address. To change the type you must first to remove it from the system configuration (use "REMOVE" button) and then wait the system to announce for the new periphery device found. Save the new device type with "SAVE" button. You can also use the "FIX" button for quick changing the type of the peripheral device.

3.3.1.3 Adding a new periphery device to the panel

Upon detecting a new periphery device (which is missing in the configuration), the following message will be displayed: "**NEW PERIPHERY DEVICES FOUND**", and the number of the detected devices will be indicated. Choose the **SAVE** button to add the new periphery devices to the panel configuration. If a device is not responding you can remove it as choosing the **REMOVE** button.
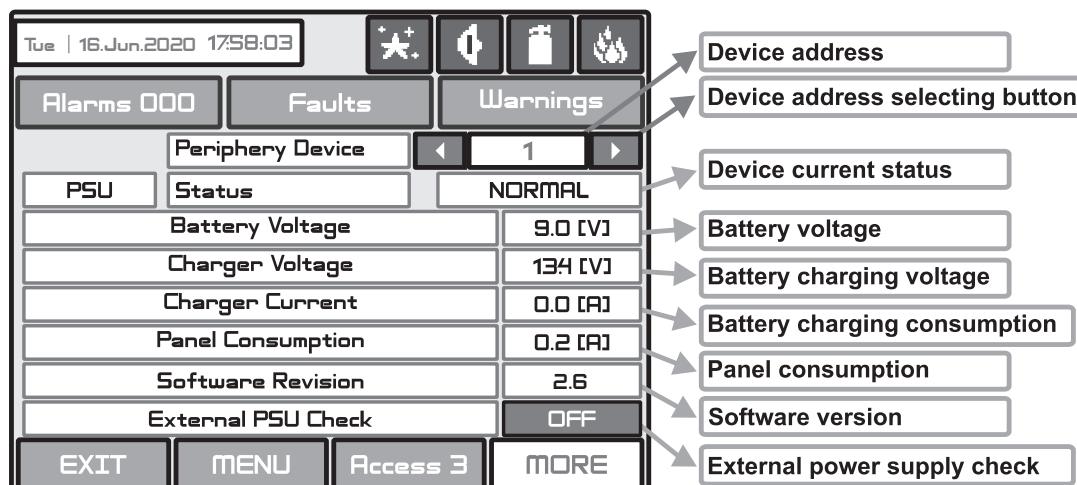
Fig. Screen 5 PSU Parameters (Power source)

On the PSU screen are visible the current technical characteristics of the main power supply unit - see Fig. Screen 5.

"External PSU Check" setting button. This is an option for continuous monitoring and reporting for Fault condition in the external power supply unit - see Figure 17. The external power supply unit (IRIS PS72 for example) is connected to "Fault In" and "Fault Out" terminals of the main power supply unit. When the option is Enabled (ON), the status of the external power supply is monitored. The panel will display a fault message "External Power Supply Fault, Periphery Device 1-PSU" in case of any trouble with the external power supply unit.
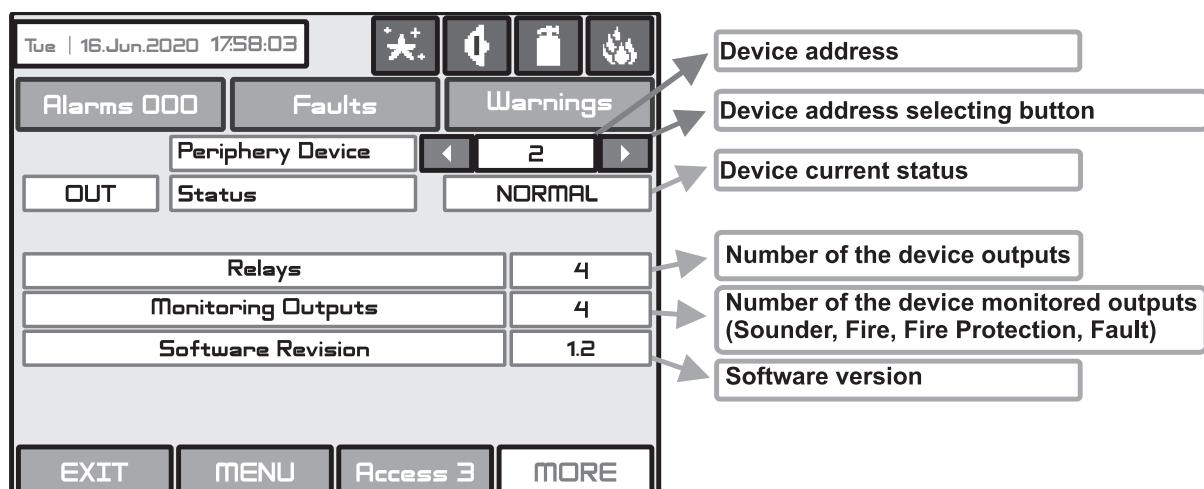
Fig. Screen 6 – OUT (Output module + 4 Relay Expander Module)
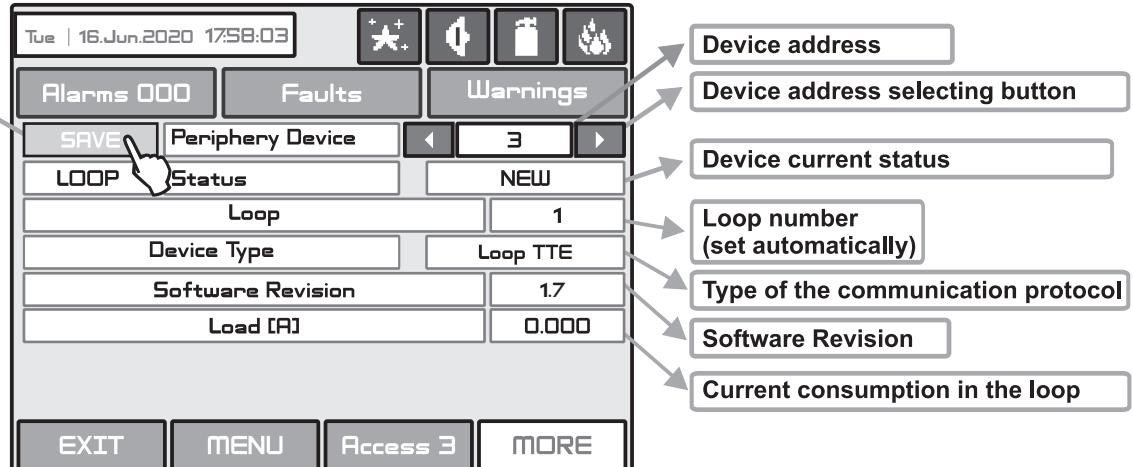
**Fig. Screen 7 - Example for adding of new periphery device
LOOP (IRIS TTE Loop controller)**

Note: After choosing the SAVE button it disappears from the screen and the status of the device from NEW changes to NORMAL.

3.3.2 Loop Devices (IRIS TTE Loop controller)

To enter the submenu for programming of the loop devices parameters from "**Devices**" menu choose button "**Loop**" - Fig. Screen 4.

> ⚠ **Attention: The IRIS fire alarm panel searches for new loop devices only when the respective loop controller has been added to the hardware configuration.**

The loop devices can be self-addressed, whereby the first along the loop acquires the lowest address.
When a new loop device is found (missing in the configuration) the message "**NEW LOOP DEVICES FOUND**" will be generated, as well as the number of detected devices. The message is generated by loops. Adding a new device to the configuration is accomplished with the **APPLY** command from the specific device menu or with the help of the general SAVE command from the **Programming** menu. Any device, which has not been added to the configuration, cannot generate messages. In case of removal of a loop device, the panel generates a "**LOOP DEVICE FAULT**" message. When a newly detected device is removed, the panel reduces the number of the new devices and if their number is 0 it shall extinguish the "**NEW LOOP DEVICES FOUND**" message. Removing the device from the configuration is accomplished with the **REMOVE** command in the menu for the specific device.

Where in abundance, it is possible for device addresses to double along the loops (see also **item 2.3.6 Maximum permissible cable length**). In such cases the message "**DOUBLE ADDRESS**" will be displayed along with the problem address. To determine the loop devices with doubled addresses, choose in sequence the loop number and doubled address. In the left bottom of the screen press the LED button - the LEDs of all devices recorded with this address will light on. That ensures quick finding all devices with one and the same address and correction with new address. The next pressing of the LED button will light off the LEDs of the devices.

Should a different device type appear at the address of a saved device, the panel will generate "**LOOP DEVICE TYPE ERROR**". For correct that you first need to remove wrong and then to save the new type of the device.

The loop controller IRIS TTE Loop automatically recognizes the types of devices in the loop.

Every device is recognized from the panel with a factory name which is displayed on the screen. The installer can set in addition a specific name for every devices according the location in the site. To enter the device name press the active field next to the "Name" field. Type the name using the keyboard, as the entered text must be not longer than 40 symbols including spaces - Fig. Screen 8.

The Installer/User can choose how to write the device names - with Cyrillic or Latin letters. The buttons of the keypad have the following meaning:

Button	Function
Cyr	Switches to Cyrillic letters.
SPE	Switches to specific letters.
Lat	Switches to Latin letters.
Sym	Switches to specific symbols.
A/a	Switches between capital and small letters.
Num	Switches to numbers.
⎵	Space.
←	Deletes numbers or letters.
↵	Confirmation of the entered numbers or letters.

Figure Screen 8.

The installer can define some additional parameters for every SensoIRIS device according its type - see also **the Appendix B** - SensoIRIS device types.

On Fig. Screen 9 is given the general view of the submenu for new loop devices connected to IRIS TTE Loop controller (SensoIRIS MCP150 in the example).
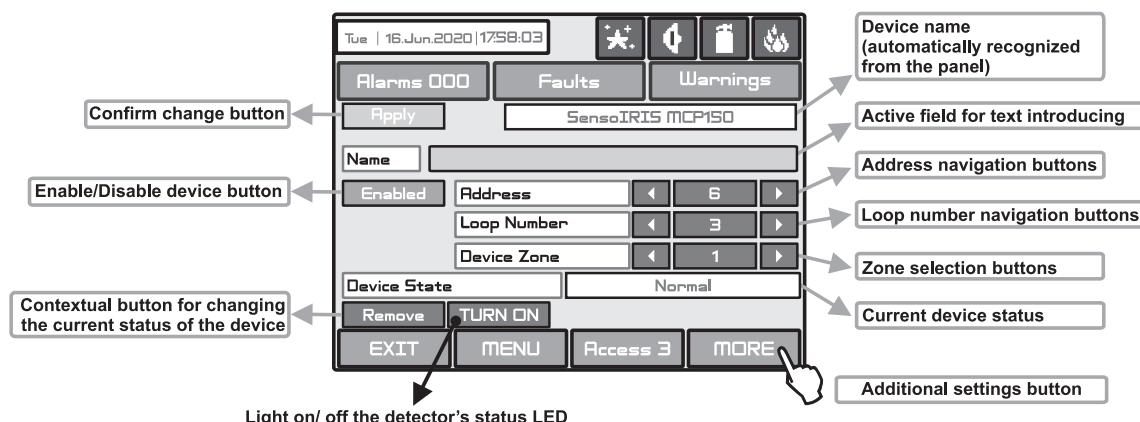
Fig. Screen 9

Description of the buttons functions which are common for all devices (Fig. Screen 9):

• *Confirm Change Button* - Quick apply (saving) of new settings for a device.

• *Button to enable/disable a device* - Button for Enabling / Disabling devices. The button is accessible from access levels 2 and 3. *Attention: When a loop device is disabled a warning message "Loop Device Disabled" is generated for the respective zone number. The disabled devices are not monitored from the panel. After a RESET command from the main screen the status of the disabled devices is not restored.*

• *Button for Removing a device* **-** Pressing the button deletes the device from the system configuration.

• *Button TURN ON/ OFF* - Turns on the LED (sound signalization for WSOU, WSOU IS, BSOU and BSOU IS) of the device when checking its place of installation. When the state is ON (white letters) the LED of the device is lighting on (sounders WSOU, WSOU IS, BSOU and BSOU IS are activated). After exiting the device menu, the button automatically switches into OFF state (black letters) and the LED lights off. Note that the devices MC-D, MINP, WSOU, WSOU IS, BSOU and BSOU IS have not LED indication.

• *Active Field for Text Introduction* **-** Choosing this field accesses the text introduction mode. The text must not exceed 40 digits together with the spaces - Fig. Screen 8. Entered information is confirmed with button 🔙 .

• *Address Navigation Buttons* **-** These buttons help to scroll over (in sequence or directly) the devices of one and the same loop.

• *Loop Number Navigation Buttons* **-** These keys alternate the loop (in sequence or directly) of the screened devices.

• *Zone Selection Buttons* **-** These keys alternate the zone (in sequence or directly) to which the device belongs.

• *Current Device Status* **-** The current device status may be one of the following:

> **NEW** - new device found in the system. You can save it by pressing the "**Apply**" button.
> **NORMAL** - the device is working properly.
> **FAULT** - the device is not responding. You can delete it by pressing the "**REMOVE**" button.
> *Note: The message for Fault condition of a loop device is displayed in a time interval up to 60-70 sec.*
> **TYPE ERROR** - the device has been saved with a different type. The type can be quickly fixed with pressing the FIX button on the upper left corner of the screen. For the new device are saved the current name and zone number.
> **NONE** - there is no device on the current address.

• *Additional Settings Button MORE* **-** The additional settings may vary according to the type of device - see the Fig. Screens10(a) - 10(s). The general fields which are active for all SensoIRIS devices are:

> **LED Blink** - Using this button the installer can enable or disable the LED indication showing the communication between the panel and the respective device. When setting ON state, the LED of the device starts blinking at every 10 seconds in normal operation mode. *Note: SensoIRIS devices MC-D, MINP, WSOU, WSOU IS, BSOU and BSOU IS have no LED indication for showing the communication with the panel.*
> **ID** - In the setup menu of every device is introduced a system **ID field with a unique 10-digit number** – the ID number of the device for identification in the system configuration.
> **Software revision** - In the field is shown the current software revision of the device.

• *Fixing a wrong type of device Button* - The button is active when the panel recognizes a device with different type on the respective place. Use the button for quick changing the type of the device as the name and the zone number. When a device is replaced physically in the system configuration with other type of a device, the panel will change its status to TYPE ERROR. The installer can quickly correct that using the FIX button (on the upper left corner of the screen), as the name and the zone number will be saved for the new device.
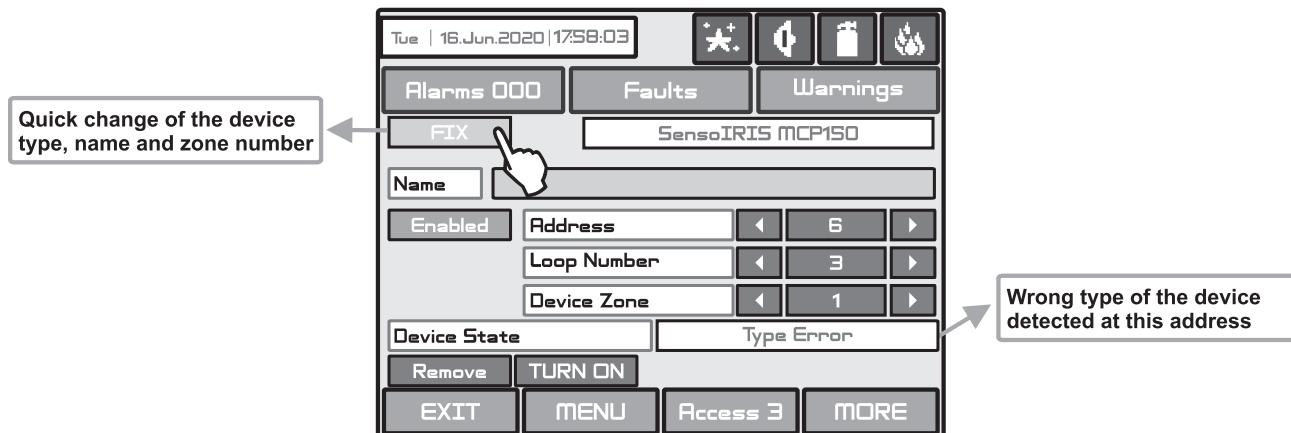
Fig. Screen 9(a)
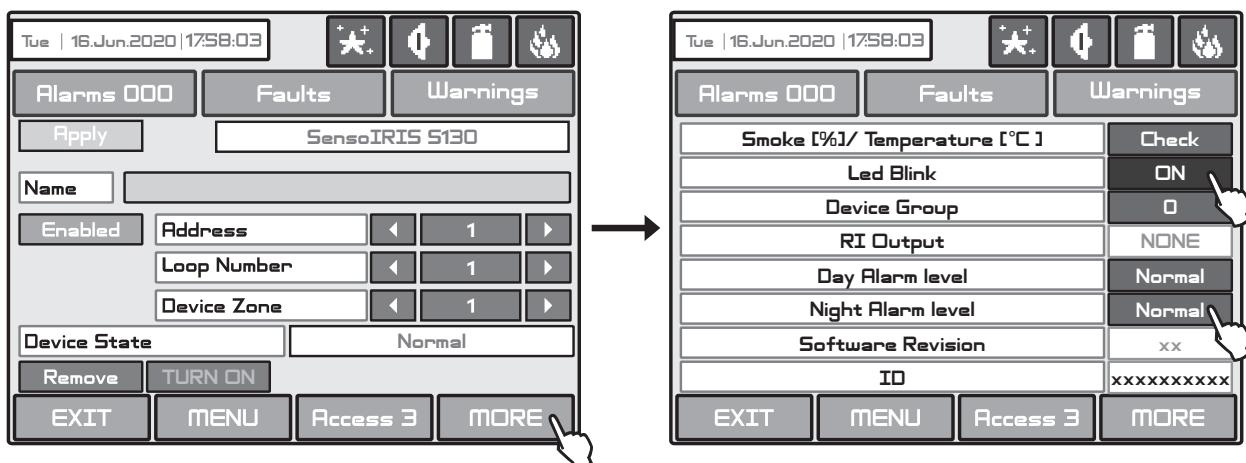
Fig. Screen 10(a) - SensoIRIS S130 (IS) fire detector.

On Fig. Screen 10 (a) is shown the SensoIRIS S130 (addressable optical smoke detector) settings screen. Choose the "MORE" button to enter a screen with additional settings:

• **Smoke (%)/ Temperature (°C)** - Press the "Check" button to enter in a new screen to review the following parameters:
  - *Smoke [%]*: Shows in percent the current level of smoke in the detector's smoke chamber.
  - *Pollution [%]*: Shows in percent the current level of pollution in the detector's smoke chamber.

• **Day Alarm Level*** - Setting the day alarm level.

• **Night Alarm Level*** - Setting the night alarm level.

* NOTE: There are 4 levels for setting of alarm level sensitivity: High, Normal, Middle and Low. To change the level of sensitivity simple press the active button next to the field and choose a new level from the list.

To save the new setting press the "Apply" button on the main screen of the device.

• **Device Group** - Setting a Device Group number for controlling a LED remote indicator. This is a field for entering a group number (from 1 to 100) for the detector. In case of a fire alarm, the detector will activate the RI for that group number. Set "0" if no device group for RI control is applicable or required for the detector.

In a device group can be included one or more other detectors for controlling a single remote indicator. This option is called RI control.

The RI control option gives the installer possibility to use one LED remote indicator for up to 100 separate detectors without using additional cabling. The installer has to set a group number for the detector with the physical connection to the remote indicator (RI) and then to associate to that same group other detectors from the loop. Thus, every detector associated to the group in case of fire alarm condition can activate the remote indicator although it is not physically connected with it.

• **RI Output** - This field can be available for change or not. It is unavailable ("NONE" is displayed in the field), when the setting in the "Device Group" field is "0" - no device group for RI control is applicable or required for the detector.

When a Device Group Number is set (1-100) the RI Output is available to change and every pressing of the button will alternatively change the status:

> • NONE – The operation of the RI Output of the detector is not controlled (activated) from the set Device Group. That means, if a remote indicator is connected to the detector's output, then it will operate individually – it will be activated only from the detector(s) to which is physically connected. Use that setting and for those cases when there is no RI connected to the detector's output.

> • DEV. GROUP – The operation of the RI Output of the detector is controlled (activated) from the set Device Group.

Note: The RI Output is the terminal "4" on the SensoIRIS B124 standard fire base used for installation of SensoIRIS fire alarm detectors. For details on hardware connection and installation refer to the installation manuals of SensoIRIS B124 standard base and the SensoIRIS detectors series.

Example using the RI functionality:

Rooms 10 and 11 are separate apartments in a hotel. All detectors installed in Room 10 are associated to Device Group 10 and all of them can activate the Remote Indicator physically connected only to Detector 1.

All detectors installed in Room 11 are associated to Device Group 11 and all of them can activate the Remote Indicator physically connected only to Detector 6.
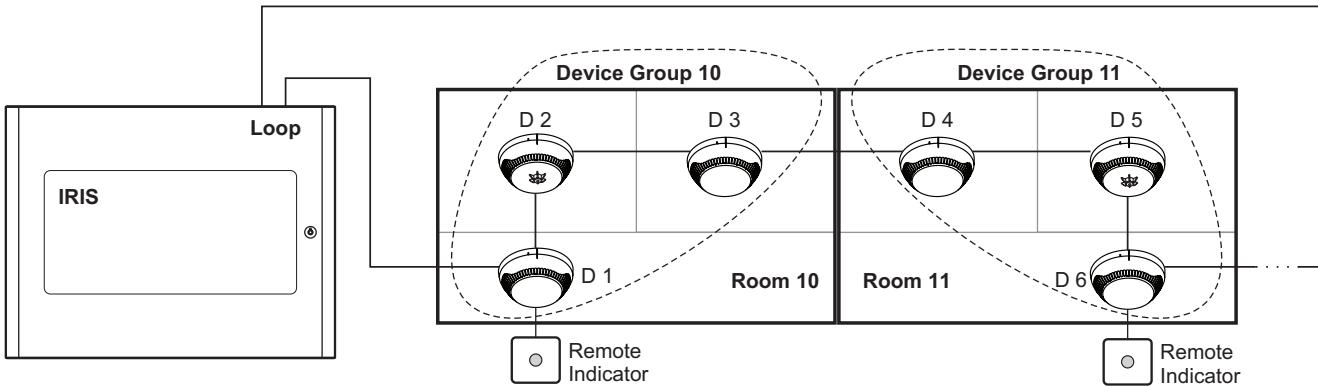
Device Group	Detectors No	Panel Settings (in Detector's menu)		
10	1 2 3	**D 1:** Device Group: 10 **RI Output: Dev. Group**	D 2: Device Group: 10 RI Output: NONE	D 3: Device Group: 10 RI Output: NONE
11	4 5 6	D 4: Device Group: 11 RI Output: NONE	D 5: Device Group: 11 RI Output: NONE	**D 6:** Device Group: 11 **RI Output: Dev. Group**

SensoIRIS T110 - Heat detector
SensoIRIS T110 IS - Heat with isolator
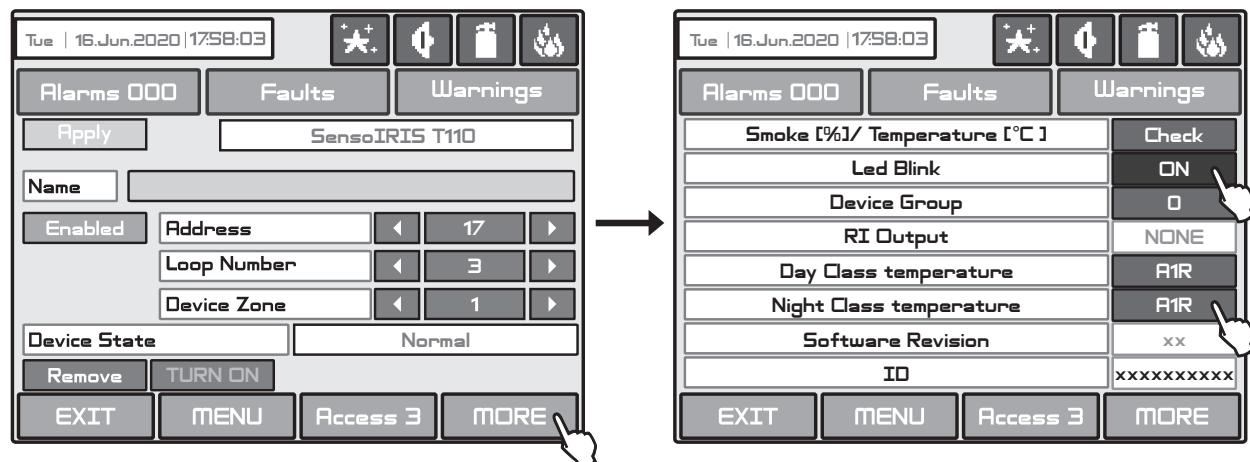
Fig. Screen 10(b) - SensoIRIS T110 (IS) fire detector.

On Fig. Screen 10(b) is shown the SensoIRIS T110 (addressable temperature detector) settings screen. Choose the "MORE" button to enter a screen with additional settings:

• *Smoke (%)/ Temperature (°C)* - Press the "Check" button to enter in a new screen to review the following parameters:
   - *Threshold for fire [°C]* – Shows the operating temperature of the detector, in degrees centigrade.
   - *Temperature [°C]* – Shows the current temperature in the room, in degrees centigrade.

• *Device Group* - Setting a Device Group number for controlling a LED remote indicator - see the detailed description in the menus for SensoIRIS S130.

• *RI Output* - Select the option according usage of the detector's RI output - see the detailed description in the menus for SensoIRIS S130.

• *Day Class temperature** - Setting the day class temperature for operation.

• *Night Class temperature** - Setting the night class temperature for operation.

* There are 3 class temperatures for operation: A1R (58º, RoR), A2S (60º), BS (75º). To change the class simple press the active button next to the field and choose a new level from the list.

To save the new setting press the "Apply" button on the main screen of the device.

SensoIRIS M140 - Combined optical-smoke and heat detector
**SensoIRIS M140 IS - Combined optical-smoke and heat detector with isolator**
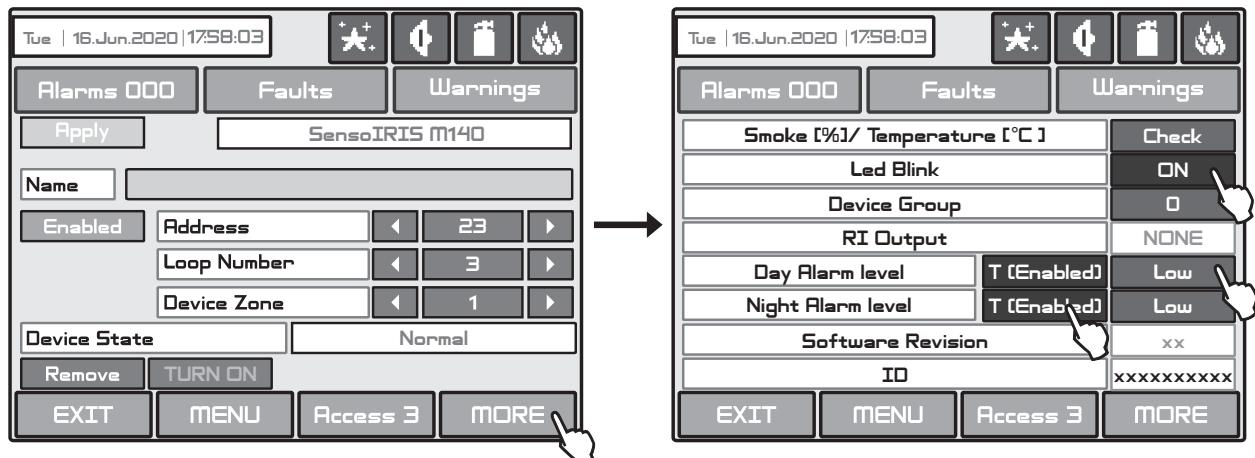
Fig. Screen 10(c) - SensoIRIS M140 (IS) fire detector.

On Fig. Screen 10(c) is shown the SensoIRIS M140 (addressable optical smoke and temperature RoR detector) settings screen. Choose the "MORE" button to enter a screen with additional settings:

• **Smoke (%)/ Heat (°C)** - Press the button to enter in a new screen for checking of the following current parameters:
- *Smoke [%]*: Shows in percent the current level of smoke in the detector's smoke chamber
- *Pollution [%]*: Shows in percent the current level of pollution in the detector's smoke chamber.
- *Threshold for fire [°C]* – Shows the operating temperature of the detector, in degrees centigrade.
- *Temperature [°C]* – Shows the current temperature in the room, in degrees centigrade.

• **Device Group** - Setting a Device Group number for controlling a LED remote indicator - see the detailed description in the menus for SensoIRIS S130.

• **RI Output** - Select the option according usage of the detector's RI output - see the detailed description in the menus for SensoIRIS S130.

• **Day Alarm Level** - Set here the sensitivity level of the optical part of the detector and enable/ disable the heat part. These settings are valid for the daytime:
- *Sensitivity level*. There are 4 levels for setting of alarm level sensitivity for the optical part: High, Normal, Middle and Low. To change the level of sensitivity simple press the active button next to the field and choose a new level from the list.
- *Heat part*. In addition for this device only, the installer can enable or disable the heat part of the detector. The state of the heat part can be changed with pressing the button.
The class temperature of SensoIRIS M140 and SensoIRIS M140 IS detectors is fixed on A1R (58º, RoR).

• **Night Alarm Level** - Set here the sensitivity level of the optical part of the detector and enable/ disable the heat part. These settings are valid for the nighttime. Operation of setting is the same with those for the day alarm level.

Attention: It is not allowed disabling the temperature and the optical parts at the same time!

To save the new setting press the "Apply" button on the main screen of the device.

SensoIRIS MCP150 - Manual call point
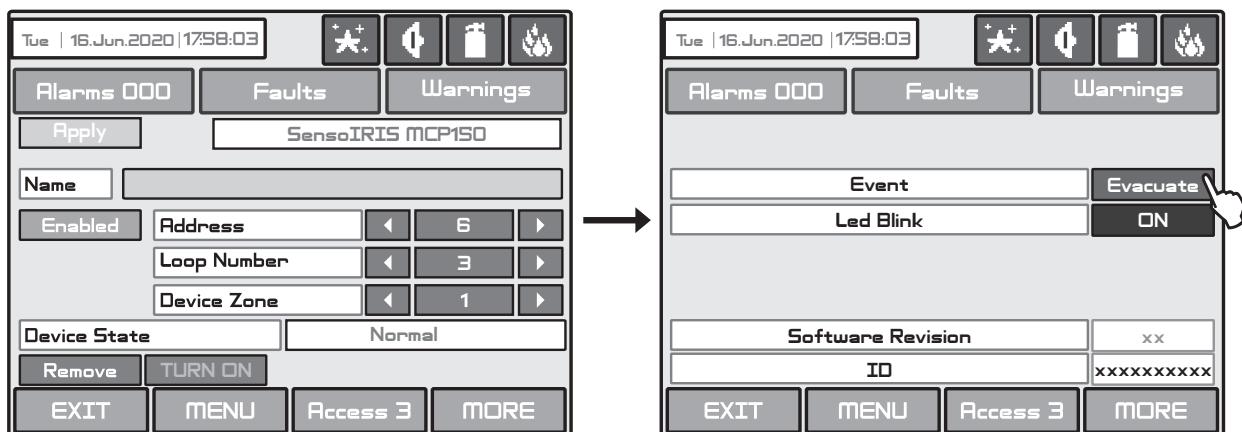
Fig. Screen 10(d) - SensoIRIS MCP150 manual call point.

On Fig. Screen 10(d) is shown the SensoIRIS MCP150* (manual call point) settings screen. Choose the "MORE" button to enter a screen with additional settings:

• **Event** - Every pressing of the button alternatively changes the type of the event generated with activation of the manual call point:

- *EVACUATE* – The sounders will be activated immediately, as the set time delays T1 and T2 are ignored.
- *ALARM* – The set time delays T1 and T2 are active and the manual call point operated as an automatic detector.

* Refers also to addressable manual call points: SensoIRIS MCP150 IP67 (outdoor installation), SensoIRIS MCP150 MR (metal box, red), SensoIRIS MCP150 PR (plastic box, red), SensoIRIS MCP150 PB (plastic box, blue, "HAUSALARM").

To save the new setting press the "Apply" button on the main screen of the device.

SensoIRIS WSOU - Wall mounted sounder
SensoIRIS WSOU IS - Wall mounted sounder with isolator
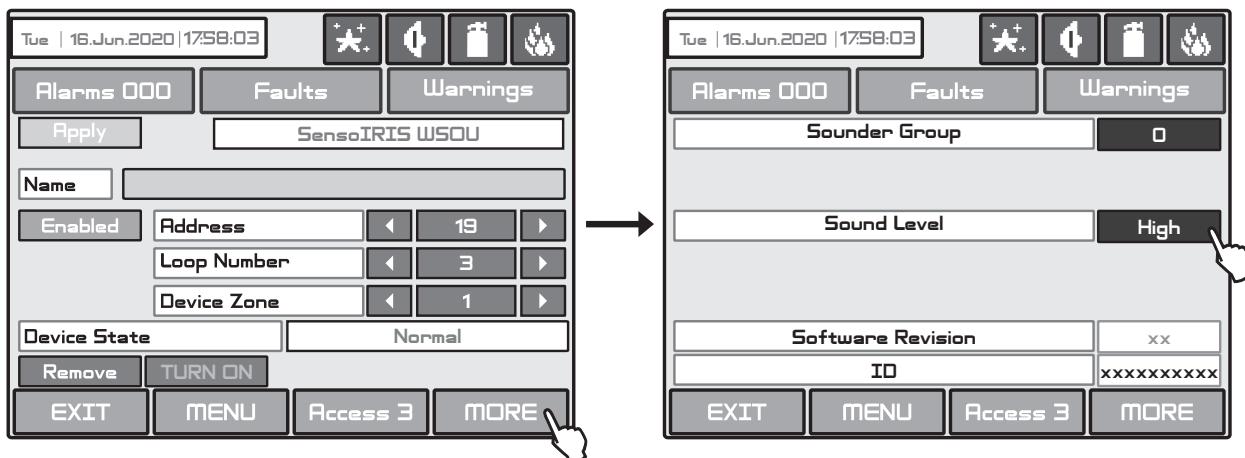
Fig. Screen 10(e) - SensoIRIS WSOU (IS) wall mounted sounder.

On Fig. Screen 10(e) is shown the SensoIRIS WSOU (wall mounted sounder) settings screen. Choose the "MORE" button to enter a screen with additional settings:

• **Sounder Group** - Enter a SOUNDER GROUP number to which the sounder is associated. Set a number from 1 to 96 according system configuration. If the sounder is not included into group leave "0". See also the example in item 3.4.9.

• **Sound Level** - Every pressing of the button alternatively changes the sound level between HIGH/ LOW – as this depends on the number of the connected sounders to the loop:

- *HIGH* – Set in those cases when the number of the connected sounders to the loop is up to 30 (sounders WSOU, WSST, WSOU IS and WSST IS).
- *LOW* – Set in those cases when the number of the connected sounders to the loop is up to 60 (sounders WSOU, WSST, WSOU IS and WSST IS).

To save the new setting press the "Apply" button on the main screen of the device.

Use the TURN ON/ OFF button to switch on/ off the sound of the sounder when checking for double addresses or finding the place of installation.

SensoIRIS WSST - Wall mounted sounder and strobe
SensoIRIS WSST IS - Wall mounted sounder and strobe with isolator
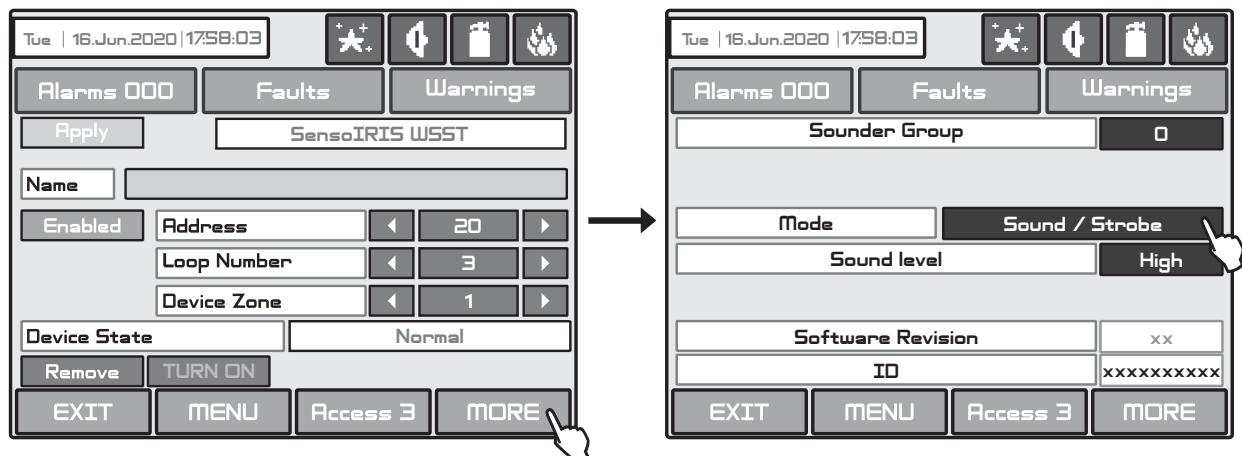
Fig. Screen 10(f) - SensoIRIS WSST(IS) wall mounted sounder and strobe.

On Fig. Screen 10(f) is shown the SensoIRIS WSST***** (wall mounted sounder and strobe) settings screen. Choose the "MORE" button to enter a screen with additional settings:

• *Sounder Group* - Enter a SOUNDER GROUP number to which the sounder is associated. Set a number from 1 to 96 according system configuration. If the sounder is not included into group leave "0". See also the example in item 3.4.9.

• *Mode* - Press to choose from a list the mode of operation of the sounder: *Strobe lamp* (only the strobe light is active in case of fire alarm event); *Sound* (only the sound is active in case of fire alarm event); *Sound/Strobe* (both the strobe light and sound are active in case of fire alarm event);

• *Sound Level* - Every pressing of the button alternatively changes the sound level between HIGH/ LOW – as this depends on the number of the connected sounders to the loop:

    - *HIGH* – Set in those cases when the number of the connected sounders to the loop is up to 30 (sounders WSOU, WSST, WSOU IS and WSST IS).
    - *LOW* – Set in those cases when the number of the connected sounders to the loop is up to 60 (sounders WSOU, WSST, WSOU IS and WSST IS).

Use the TURN ON/ OFF button to switch on/ off the sound and LED indication of the sounder when checking for double addresses or finding the place of installation.

***** *Refers also to addressable wall sounder and strobe* SensoIRIS WS and SensoIRIS WS IS.

To save the new setting press the "Apply" button on the main screen of the device.

SensoIRIS BSOU - Base with sounder
SensoIRIS BSOU IS - Base with sounder with isolator
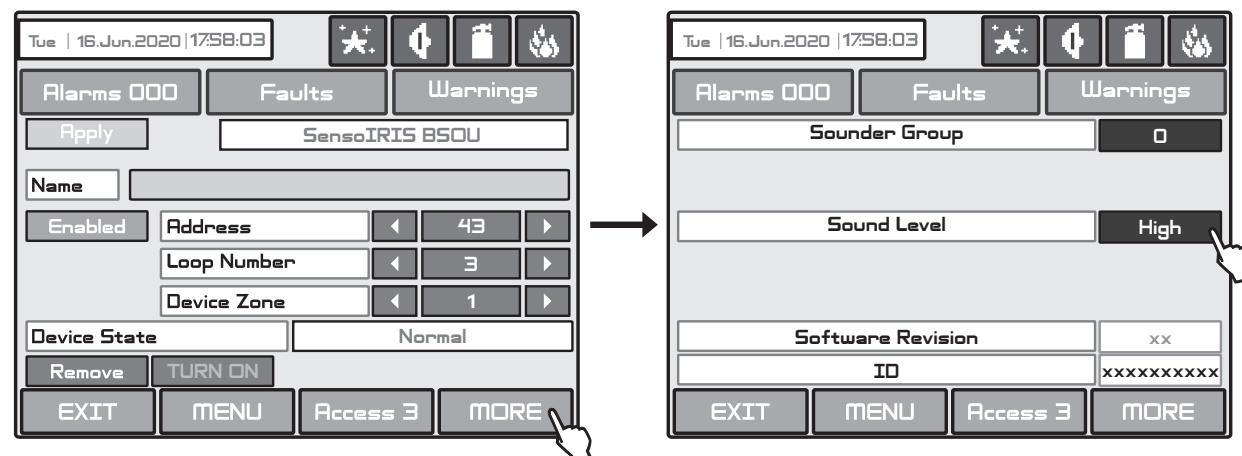
**Fig. Screen 10(g) - SensoIRIS BSOU (IS) base with sounder.**

On Fig. Screen 10(g) is shown the SensoIRIS BSOU (base with sounder) settings screen. Choose the "MORE" button to enter a screen with additional settings:

• *Sounder Group* - Enter a SOUNDER GROUP number to which the sounder is associated. Set a number from 1 to 96 according system configuration. If the sounder is not included into group leave "0". See also the example in item 3.4.9.

• *Sound Level* - Every pressing of the button alternatively changes the sound level between HIGH/ LOW – as this depends on the number of the connected sounders to the loop:

> - *HIGH* – Set in those cases when the number of the connected sounders to the loop is up to 30 (sounders BSOU, BSST, BSOU IS and BSST IS).
> - *LOW* – Set in those cases when the number of the connected sounders to the loop is up to 100 (sounders BSOU, BSST, BSOU IS and BSST IS).

Use the TURN ON/ OFF button to switch on/ off the sound of the sounder when checking for double addresses or finding the place of installation.

SensoIRIS BSST - Base with sounder and strobe
SensoIRIS BSST IS - Base with sounder and strobe with isolator

Fig. Screen 10(h) - SensoIRIS BSST (IS) base with sounder and strobe.

On Fig. Screen 10(h) is shown the SensoIRIS BSST (base with sounder and strobe) settings screen. Choose the "MORE" button to enter a screen with additional settings:

• *Sounder Group* - Enter a SOUNDER GROUP number to which the sounder is associated. Set a number from 1 to 96 according system configuration. If the sounder is not included into group leave "0". See also the example in item 3.4.9.

• *Mode* - Press to choose from a list the mode of operation of the sounder: *Strobe lamp* (only the strobe light is active in case of fire alarm event); *Sound* (only the sound is active in case of fire alarm event); *Sound/Strobe* (both the strobe light and sound are active in case of fire alarm event);

• *Sound Level* - Every pressing of the button alternatively changes the sound level between HIGH/ LOW – as this depends on the number of the connected sounders to the loop:

> - *HIGH* – Set in those cases when the number of the connected sounders to the loop is up to 30 (sounders BSOU, BSST, BSOU IS and BSST IS).
> - *LOW* – Set in those cases when the number of the connected sounders to the loop is up to 100 (sounders BSOU, BSST, BSOU IS and BSST IS).

Use the TURN ON/ OFF button to switch on/ off the sound and LED indication of the sounder when checking for double addresses or finding the place of installation.

To save the new setting press the "Apply" button on the main screen of the device.

> **Attention: The disabling of the sounders is not in conformity with EN54-2 standard! If you disable a sounder a warning message will appear on the screen.**
> **The disablement of sounder with bases type BSOU, BSOU IS, BSST and BSST IS) will not affect the operation of the mounted to it addressable detector.**
>
> **Attention: It is possible to connect different type of sounders to the loop at the same time, but the total consumption of the sounders in the loop must be up to 300mA!**
> **Note: The automatic detectors mounted to bases BSOU, BSOU IS, BSST and BSST IS are assigned at separate addresses in the control panel!**

To calculate the total consumption of the sounders in the loop and to define the proper sound level, you can use the Tables 1 and below, as fill in the number of the used sounders according their type.

Table 1

Calculation of the total consumption of the sounders in the loop with defined sound level and set **main tone type 27** (see item 3.7.4 Sounders Mode).

Sounder	Number	HIGH Sound Level	LOW Sound Level	Total consumption, mA (HIGH + LOW)
WSOU		____ x 16,5mA	____ x 5mA	
WSOU IS		____ x 16,5mA	____ x 5mA	
WSST*		____ x 22mA	____ x 12mA	
WSST IS*		____ x 22mA	____ x 12mA	
WS		____ x 13mA	____ x 5mA	
WS IS		____ x 13mA	____ x 5mA	
BSOU		____ x 10mA	____ x 3mA	
BSOU IS		____ x 10mA	____ x 3mA	
BSST*		____ x 10mA	____ x 3mA	
BSST IS*		____ x 10mA	____ x 3mA	
Consumption of the sounders in the loop:				

Table 2

Calculation of the total consumption of the sounders in the loop with defined sound level and set **other tone type** (see item 3.7.4 Sounders Mode).

Sounder	Number	HIGH Sound Level	LOW Sound Level	Total consumption, mA (HIGH + LOW)
WSOU		____ x 10mA	____ x 4mA	
WSOU IS		____ x 10mA	____ x 4mA	
WSST*		____ x 16,5mA	____ x 11mA	
WSST IS*		____ x 16,5mA	____ x 11mA	
BSOU		____ x 10mA	____ x 3mA	
BSOU IS		____ x 10mA	____ x 3mA	
BSST*		____ x 10mA	____ x 3mA	
BSST IS*		____ x 10mA	____ x 3mA	
Consumption of the sounders in the loop:				

*** NOTE:** *Mode of operation **Sound/Strobe** (both the strobe light and sound are active in case of fire alarm event). The consumption for the other operation modes is pointed in the individual installation manual for every of the sounders.*

SensoIRIS MINP M - Mini input module
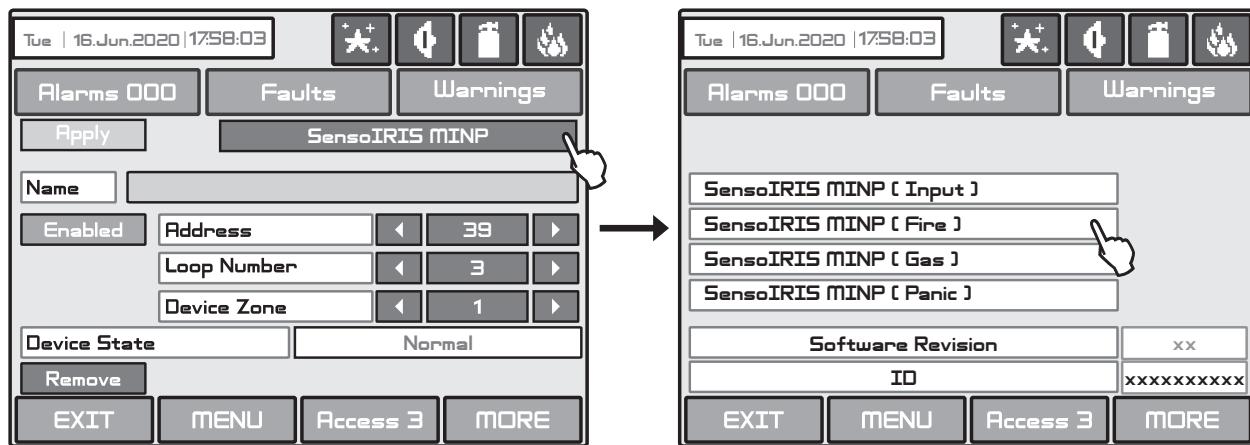
Fig. Screen 10(i) - SensoIRIS MINP M mini input module.

On Fig. Screen 10(i) is shown the screen when the panel recognizes SensoIRIS MINP M - mini module with one monitored input. The module monitors and transfers to control panel the state of the input (state ON or state OFF). Devices with different functionality and action can be connected to the input of SensoIRIS MINP M. When you press the button with the name of the module as shown on Screen 10(i), the panel offers you a list with options. Choose that type of the device according the input signal for activation of the mini module. The different types have the following meaning:

- ***SensoIRIS MINP (INPUT)*** - The module operates as single switch and you have to program the logic of activation in Menu INPUTS.
- ***SensoIRIS MINP (FIRE)*** - The module operates as fire detector and generates "FIRE ALARM" event to the panel when is activated. *(Note: This type of input is not EN54-2 compliant.)*
- ***SensoIRIS MINP (GAS)*** - The module operates as gas detector and generates "GAS ALARM" event to the panel when is activated.
- ***SensoIRIS MINP (PANIC)*** - The module operates as panic button and generates "PANIC ALARM" event to the panel when is activated.

If there is an active Fault at the input, it is displayed at the additional settings menu:
- OPEN - The line connected to the input is open or no EOL module is connected to the terminal in case the input is not used.
- SHORT - There is a short-circuit in the line connected to the input.

The chosen type is set automatically in the factory name field for the device. Press the "Apply" button to save the settings.

An additional setting is available when you choose the option types ***SensoIRIS MINP (GAS)*** and ***SensoIRIS MINP (PANIC).*** Press the "MORE" button - there you can enable or disable the sounders when the input is activated. Choosing the "Enabled" option means that the fire sounders in the system will turn on when the mini input module is activated - Screen 10(j).
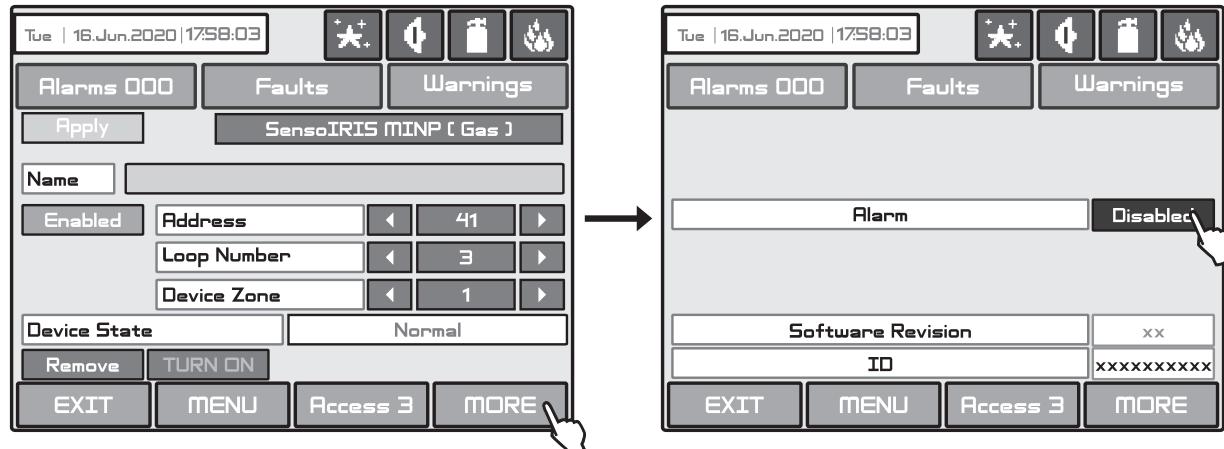
Fig. Screen 10(j) - Disabling the sounders for SensoIRIS MINP (GAS).

Every pressing of "Disabling/ Enabling" button changes alternatively the parameter setting. Going back to the previous screen is with pressing the "MORE" button. Press the "Apply" button to save the settings.

SensoIRIS MC-D - Addressable module for conventional detectors SensoMAG series
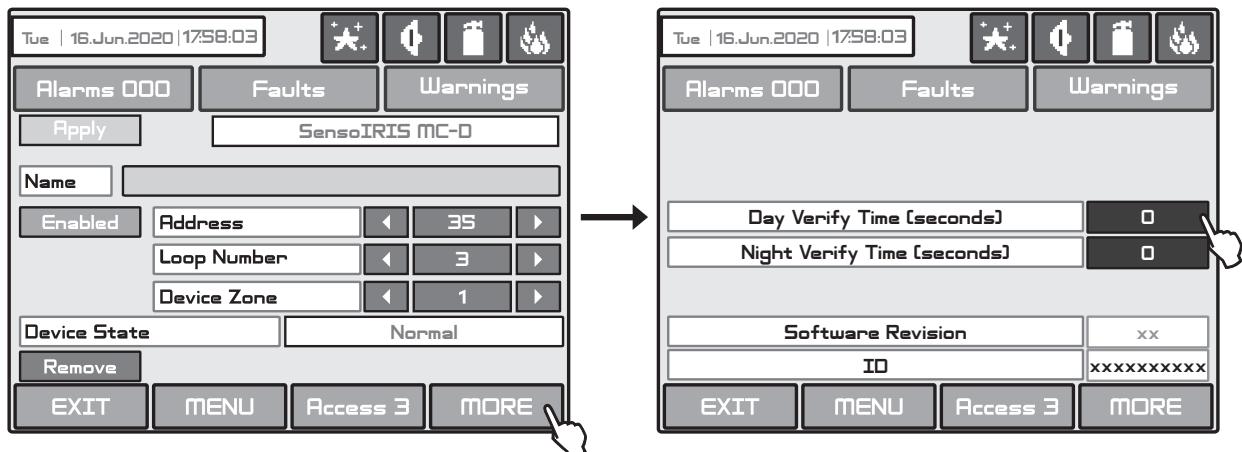
Fig. Screen 10(k) - SensoIRIS MC-D fire base for conventional SensoMAG detectors.

On Fig. Screen 10(k) is shown the SensoIRIS MC-D (addressable base for SensoMAG conventional detectors) settings screen. Choose the "MORE" button to enter a screen with additional settings:
• *Day Verify Time (seconds)* - Setting of daytime confirmation of alarm in interval from 0 to 60 seconds.
• *Night Verify Time (seconds)* - Setting of nighttime confirmation of alarm in interval from 0 to 60 seconds.

Important Note: The alarm must remain active during the programmable period of time in order to generate an alarm event from the panel. If the detector restores its normal state prior to time-out, the panel shall not generate alarm.

SensoIRIS MIO-04 - Module with 4 outputs
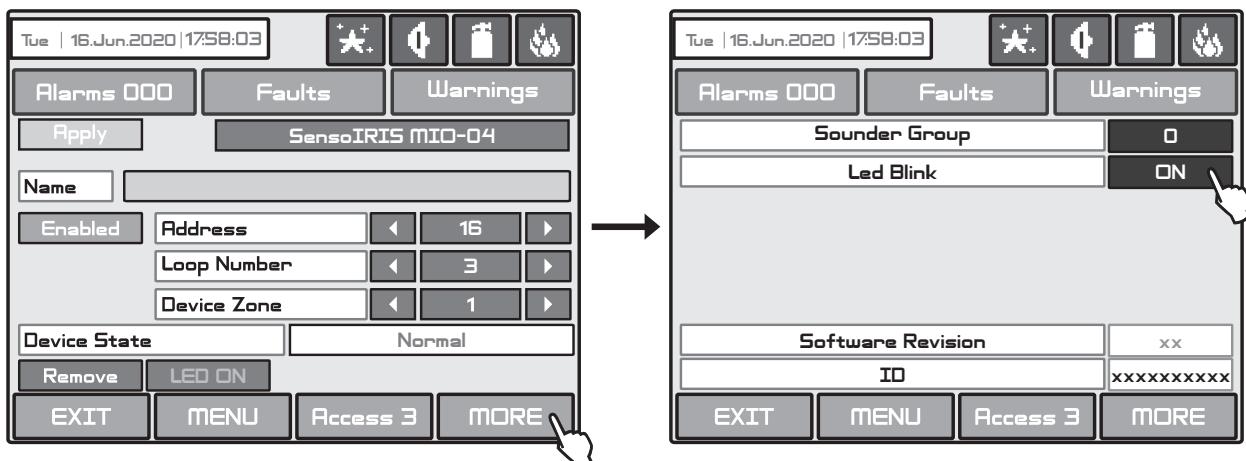
Fig. Screen 10(l) - SensoIRIS MIO-04 module.

On Fig. Screen 10(l) is shown the SensoIRIS MIO-04 (module with 4 outputs) settings screen. Choose the "MORE" button to enter a screen with additional settings.

• *Sounder Group* - Enter a SOUNDER GROUP number to which the module is associated. Set a number from 1 to 96 according system configuration. If the module is not included into group leave "0". See also the example in item 3.4.9.

Note: The sounder group option is applicable for modules, when to one or more of its outputs are connected conventional sounders and the "Sounders Mode" operation is set for the channel.

The type of the module's channels can be configured with pressing the field with the module's system name. On the screen is shown a list with module's channels. To set the type of the event for activation of the channel press the button next to it.

When a channel (1-4) of SensoIRIS MIO-04 is defined as OUTPUT, you have to go to menu OUTPUTS to configure their operation (SYSTEM - PROGRAMMING - OUTPUTS) - see the description of the menu in item 3.6.

The channels (1-4) can be configured also as: ALARM, EVACUATE, RESET or SOUNDERS MODE type. To select a different type for the channel press the button next to the field. On the screen is displayed a list with the mentioned above action types:

- *ALARM* - Activation in case of fire alarm event in the system.
- *EVACUATE* - Activation in case of evacuation event in the system.
- *RESET* - Activation in case of reset in the system.
- *SOUNDERS MODE* - Operation as an addressable sounder. This option is useful for applications where a conventional sounder is connected to the output.

In "Name" field you can enter a specific name up to 40 symbols.
Press the "Apply" button in the main device screen to save the settings.

SensoIRIS MIO-22 - Module with 2 inputs and 2 outputs

Fig. Screen 10(m) - SensoIRIS MIO-22 module.

On Fig. Screen 10(m) is shown the SensoIRIS MIO-22 (module with 2 inputs and 2 outputs) settings screen. The panel recognizes the Input 1 as Channel 1, Input 2 as Channel 2, Output 1 as Channel 3 and Output 2 as Channel 4. Choose the "MORE" button to enter a screen with additional settings:

• *Sounder Group* - Enter a SOUNDER GROUP number to which the module is associated. Set a number from 1 to 96 according system configuration. If the module is not included into group leave "0". See also the example in item 3.4.9.

Note: The sounder group option is applicable for modules, when to one or more of its outputs are connected conventional sounders and the "Sounders Mode" operation is set for the channel.

• *Led Blink* - Button for changing the LED mode: *ON Setting* - The LED blinks at every query from the station; *OFF Setting* - The LED does not show the dialogue cycle.

If there is an active Fault at the inputs (Channel 1 and Channel 2) it is displayed in the additional settings screen - after the number of the channel is displayed the type of the fault:

- OPEN - The line connected to the input is open or no EOL module is connected to the terminal in case the input is not used.
- SHORT - There is a short-circuit in the line connected to the input.

The type of the module's channels can be configured with pressing the field with the module's name. On the screen is shown a list with module's channels. To set the type of the channel press the button next to it:

To enter the type of the event activated the input press the button next to the channel with the respective number and select one of the options.

• INPUT Channels
When a channel (1-2) are defined as INPUT you have to go to menu INPUTS (SYSTEM-PROGRAMMING-INPUTS) to configure their operation - see the description of the menu in item 3.5.

The input channels (1-2) can be configured also as: ALARM, EVACUATE, GAS ALARM or PANIC type. To select a different type for the input channel press the button next to the field. On the screen is displayed a list with the mentioned above action types:

- *INPUT* - The channel operates as single switch and you have to program the logic of activation in Menu INPUTS.
- *GAS ALARM!* - The channel operates as gas detector and generates "GAS ALARM" event to the panel when is activated.
- *PANIC!* - The channel operates as panic button and generates "PANIC ALARM" event to the panel when is activated.
- *ALARM* - The channel operates as fire detector and generates "FIRE ALARM" event to the panel when is activated. *(Note: This type of input is not EN54-2 compliant.)*
- *EVACUATE* - The channel operates as fire detector and generates "EVACUATION" event to the panel when is activated. *(Note: This type of input is not EN54-2 compliant.)*

• OUTPUT Channels
When a channel (3-4) of SensoIRIS MIO-22 is defined as OUTPUT, you have to go to menu OUTPUTS to configure their operation (SYSTEM - PROGRAMMING - OUTPUTS) - see the description of the menu in item 3.6.

The channels (3-4) can be configured also as: ALARM, EVACUATE, RESET or SOUNDERS MODE type. To select a different type for the channel press the button next to the field. On the screen is displayed a list with the mentioned above action types:

- *ALARM* - Activation in case of fire alarm event in the system.
- *EVACUATE* - Activation in case of evacuation event in the system.
- *RESET* - Activation in case of reset in the system.
- *SOUNDERS MODE* - Operation as an addressable sounder. This option is useful for applications where a conventional sounder is connected to the output.

In "Name" field you can enter a specific name up to 40 symbols.
Press the "Apply" button in the main device screen to save the settings.

Fig. Screen 10(n) - SensoIRIS MIO-22M module.

On Fig. Screen 10(n) is shown the SensoIRIS MIO-22M (module with 2 inputs and 2 monitored outputs) settings screen. The panel recognizes the Input 1 as Channel 1, Input 2 as Channel 2, Output 1 as Channel 3 and Output 2 as Channel 4. Every of the outputs can be set to operate as monitored or non-monitored type, as the setting is via jumpers on the module's PCB. The active state of the monitored outputs can be programmed for operation in Normal or Inverted mode with configuration in menu OUTPUTS (SYSTEM - PROGRAMMING - OUTPUTS) - see the description of the menu in item 3.6. When an output is set to operate as Monitored, it must be powered on from an external power supply unit (18-30VDC).

Choose the "MORE" button to enter a screen with additional settings and to view the currents status of all channels:

• *Sounder Group* - Enter a SOUNDER GROUP number to which the module is associated. Set a number from 1 to 96 according system configuration. If the module is not included into group leave "0". See also the example in item 3.4.9.

Note: The sounder group option is applicable for modules, when to one or more of its outputs are connected conventional sounders and the "Sounders Mode" operation is set for the channel.

• *Led Blink* - Button for changing the LED mode:
   ON Setting - The LED blinks at every query from the station;
   OFF Setting - The LED does not show the dialogue cycle.

• *Channel 1* - A field with indication for the current status of INPUT 1.

• *Channel 2* - A field with indication for the current status of INPUT 2.

The status of INPUT 1 and INPUT 2 can be one of the following:
   - *OFF* - The INPUT is deactivated;
   - *ON* - The INPUT is activated;
   - *OPEN* - The line connected to the input is open or no EOL module is connected to the terminal in case the input is not used;
   - *SHORT* - There is a short-circuit in the line connected to the input.

• *Channel 3* - Two fields with indication for the set operation type, Monitored or Not Monitored, and the current status of OUTPUT 1.

• *Channel 4* - Two fields with indication for the set operation type, Monitored or Not Monitored, and the current status of OUTPUT 2.

Description of OUTPUT 1 and OUTPUT 2 operation type:
   - *Not Mon.* - The OUTPUT is set to operate as Not Monitored type - no jumper is set on the PCB;
   - *Monit.* - The OUTPUT is set to operate as Monitored type - a jumper is set on the PCB.
   - *Type Error* - Wrong type of the output is detected. That means that a jumper is set or removed when the powers supply of the module is ON. The fault will be cleared with switching off the power supply of the module, including the external power supply unit, and switching it on again.
   - *Power Supply fault* - Missing or low external power supply. The fault is cleared when the normal power supply is restored.

Attention: The jumpers for setting of Monitored operation type must be set or removed ONLY with power supply OFF of the module, including the external power supply! If the jumper is set or removed with power supply on, the operation type of the module will change to "Type Error"!

The status of OUTPUT 1 and OUTPUT 2 can be one of the following:
- *OFF* - The OUTPUT is deactivated;
- *OPEN* - The line connected to the output is open or no EOL module is connected to the terminal in case the output is not used;
- *SHORT* - There is a short-circuit in the line connected to the output. In case of short-circuit at energized monitored output, the power of the output will be off until the normal operating condition is restored.

The type of the module's channels can be configured with pressing the field with the module's name. On the screen is shown a list with module's channels. To set the type of the channel press the button next to it:
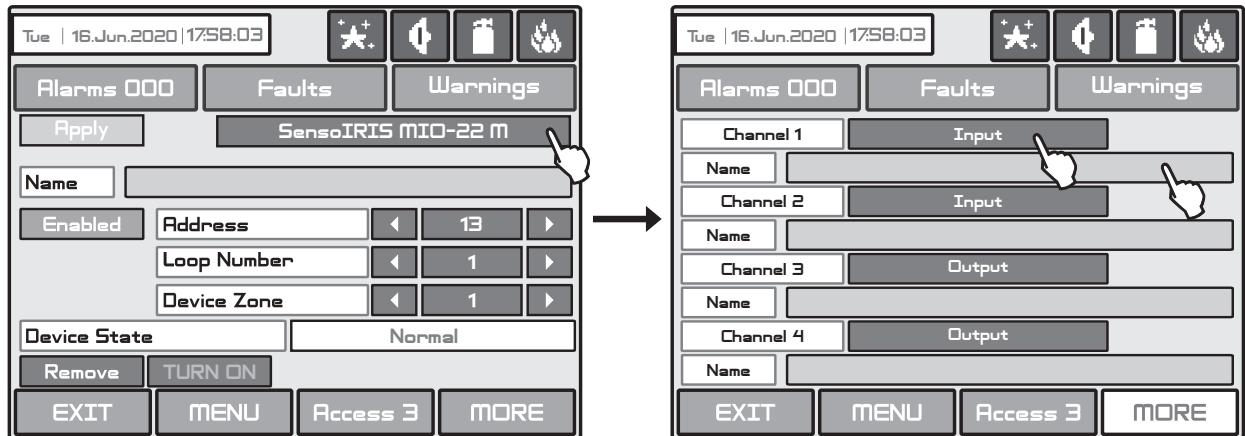
To enter the type of the event activated the input press the button next to the channel with the respective number and select one of the options. For every channel can be set a name up to 40 symbols.
The descriptions of Input and Output channels are the same with these for SensoIRIS MIO22 addressable module.

In case of a fault condition at modules' outputs its status is changed to "IO Fault". Press the MORE button to review the type of the fault. The module will return to Normal state when the fault is restored. At the example below the "OI Fault" state is caused from Type Error condition - the jumper of Output 2 (Channel 4) has been set or removed without switching off the power supply of the module.
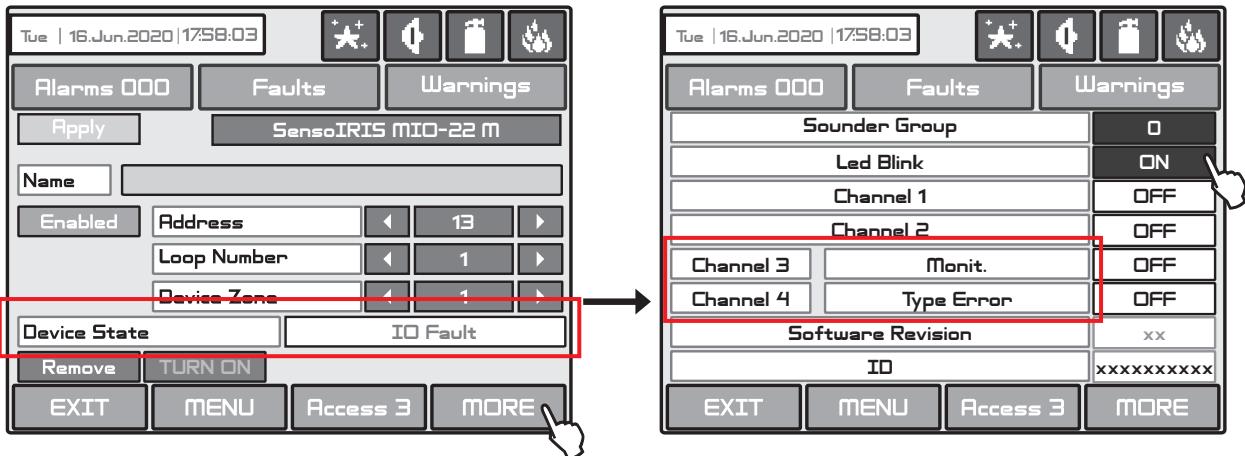
SensoIRIS MIO-40 - Module with 4 inputs
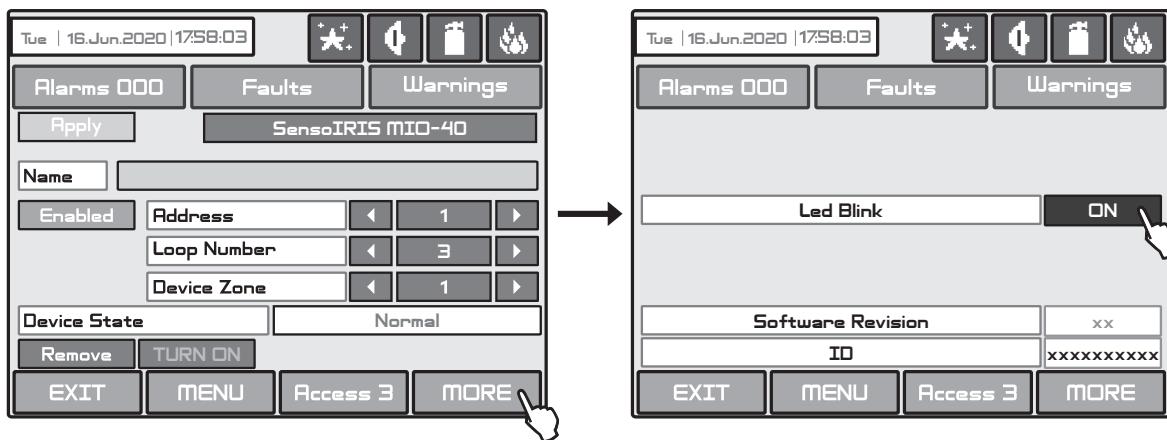
Fig. Screen 10(o) - SensoIRIS MIO-40 module.

On Fig. Screen 10(o is shown the SensoIRIS MIO-40 (module with 4 inputs) settings screen. The panel recognizes the Input 1 as Channel 1, Input 2 as Channel 2, Input 3 as Channel 3 and Input 4 as Channel 4. Choose the "MORE" button to enter a screen with additional settings:

• **Led Blink** - Button for changing the LED mode: *ON Setting* - The LED blinks at every query from the station; *OFF Setting* - The LED does not show the dialogue cycle.

If there is an active Fault at the inputs (Channel 1, Channel 2, Channel 3 and Channel 4) it is displayed in the additional settings screen - after the number of the channel is displayed the type of the fault:

      - OPEN - The line connected to the input is open or no EOL module is connected to the terminal in case the input is not used.

      - SHORT - There is a short-circuit in the line connected to the input.

The type of the module's channels can be configured with pressing the field with the module's name. On the screen is shown a list with module's channels. To set the type of the channel press the button next to it:

To enter the type of the event activated the input press the button next to the channel with the respective number and select one of the options. For every channel can be set a name up to 40 symbols.

When the input channels (1-4) are defined as INPUT type you have to go to menu INPUTS to configure their operation (SYSTEM - PROGRAMMING - INPUTS) - see the description of the menu in item 3.5.

The input channels (1-4) can be configured also as: ALARM, EVACUATE, GAS ALARM or PANIC type. To select a different type for the input channel press the button next to the field. On the screen is displayed a list with the mentioned above action types:

      - *GAS ALARM!* - The channel operates as gas detector and generates "GAS ALARM" event to the panel when is activated.

      - *PANIC!* - The channel operates as panic button and generates "PANIC ALARM" event to the panel when is activated.

      - *INPUT* - The channel operates as single switch and you have to program the logic of activation in Menu INPUTS.

      - *ALARM* - The channel operates as fire detector and generates "FIRE ALARM" event to the panel when is activated. *(Note: This type of input is not EN54-2 compliant.)*

      - *EVACUATE* - The channel operates as fire detector and generates "EVACUATION" event to the panel when is activated. *(Note: This type of input is not EN54-2 compliant.)*

Press the "Apply" button to save the settings.

SensoIRIS MCZ - Conventional zone module
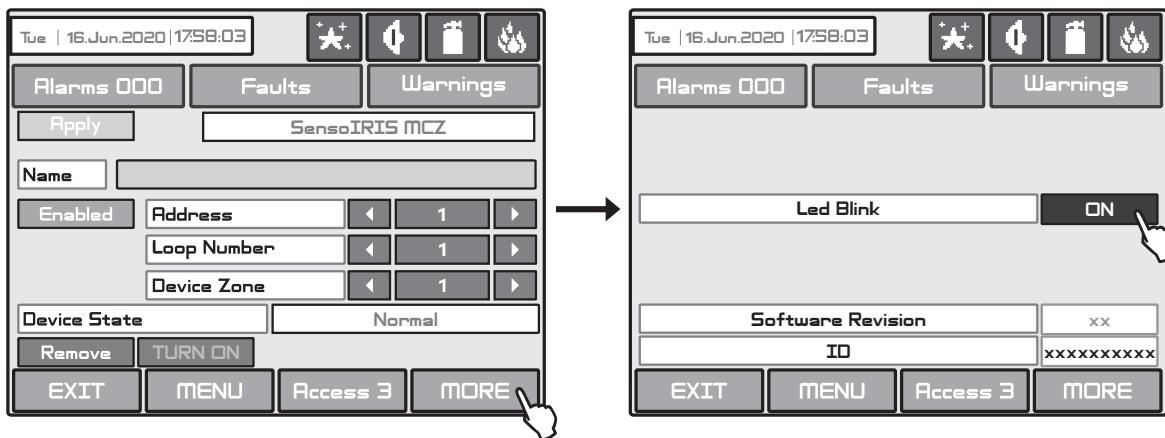
Fig. Screen 10(p) - SensoIRIS MCZ module.

On Fig. Screen 10(p) is shown the SensoIRIS MCZ (conventional zone module) settings screen. Choose the "MORE" button to enter a screen with additional settings:

• *Led Blink* - Button for changing the LED mode: *ON Setting* - The LED blinks at every query from the station; *OFF Setting* - The LED does not show the dialogue cycle.

To configure the **input operation** you have to go to menu INPUTS (**SYSTEM - PROGRAMMING** - **INPUTS**) - see the description of the menu in item 3.5.

If there is an active Fault it is displayed in the additional settings screen:
- OPEN – The conventional line to the module is open.
- SHORT – A short-circuit in the line.
- POWER – Fault or technical trouble with the external power supply of the module.

Press the "Apply" button to save the settings.

SensoIRIS MOUT - Module potential output
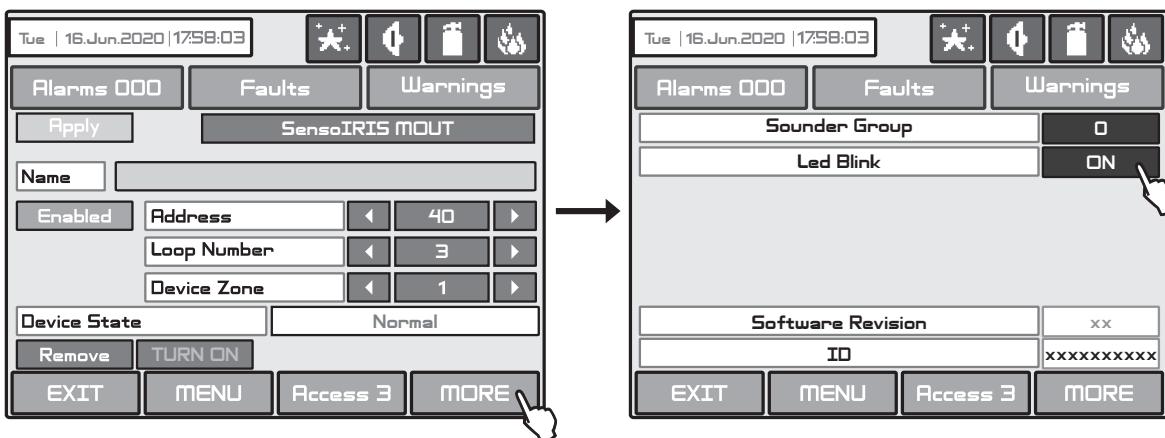
Fig. Screen 10(q) - SensoIRIS MOUT module.

On Fig. Screen 10(q) is shown the SensoIRIS MOUT (module potential output) settings screen. The module is used for connection of conventional sounders. Choose the "MORE" button to enter a screen with additional settings:

• *Sounder Group* - Enter a SOUNDER GROUP number to which the module is associated. Set a number from 1 to 96 according system configuration. If the module is not included into group leave "0". See also the example in item 3.4.9.

Note: The sounder group option is applicable for modules, when to one or more of its outputs are connected conventional sounders and the "Sounders Mode" operation is set for the channel.

• *Led Blink* - Button for changing the LED mode: ON Setting - The LED blinks at every query from the station; OFF Setting - The LED does not show the dialogue cycle.

When a channel of SensoIRIS MOUT is defined as OUTPUT, you have to go to menu OUTPUTS to configure its operation (SYSTEM - PROGRAMMING - OUTPUTS) - see the description of the menu in item 3.6.

The channel can be configured also as: ALARM, EVACUATE, RESET or SOUNDERS MODE type. To select a different type for the channel, press the button next to the field. On the screen is displayed a list with the mentioned above action

types:

- *ALARM* - Activation in case of fire alarm event in the system.
- *EVACUATE* - Activation in case of evacuation event in the system.
- *RESET* - Activation in case of reset in the system.
- *SOUNDERS MODE* - Operation as an addressable sounder. This option is useful for applications where a conventional sounder is connected to the output.

In "Name" field you can enter a specific name up to 40 symbols.
Press the "Apply" button in the main device screen to save the settings.

The output of SensoIRIS MOUT module can be programmed for operation in two working modes: NORMAL and INVERTED which is set in the **OUTPUTS menu** (see item 3.6) in **"Output Polarity" field**:
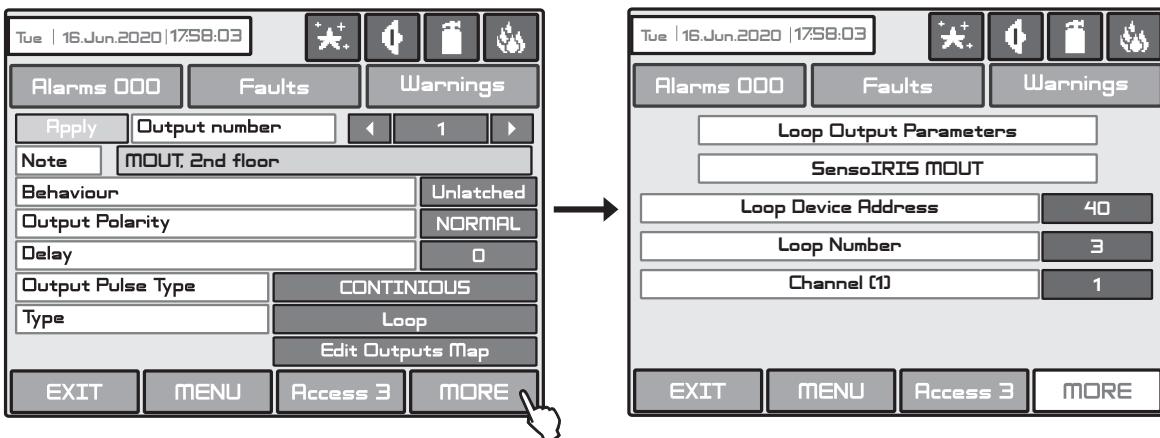
Use the button "Output Polarity" to set the type of operation of the module's relay. Every pressing of the button changes alternatively the polarity type:

- NORMAL POLARITY - The module's relay will switch on when receiving of activation signal and will switch off when the signal is lost.

- INVERTED POLARITY - The module's relay will switch on when the signal is lost and will switch off when receiving of activation signal.

Note: The LED indication of the module does not follow its logical status.

Press the "Apply" button to save the settings.

SensoIRIS MOUT-240 - Module for 240V interface
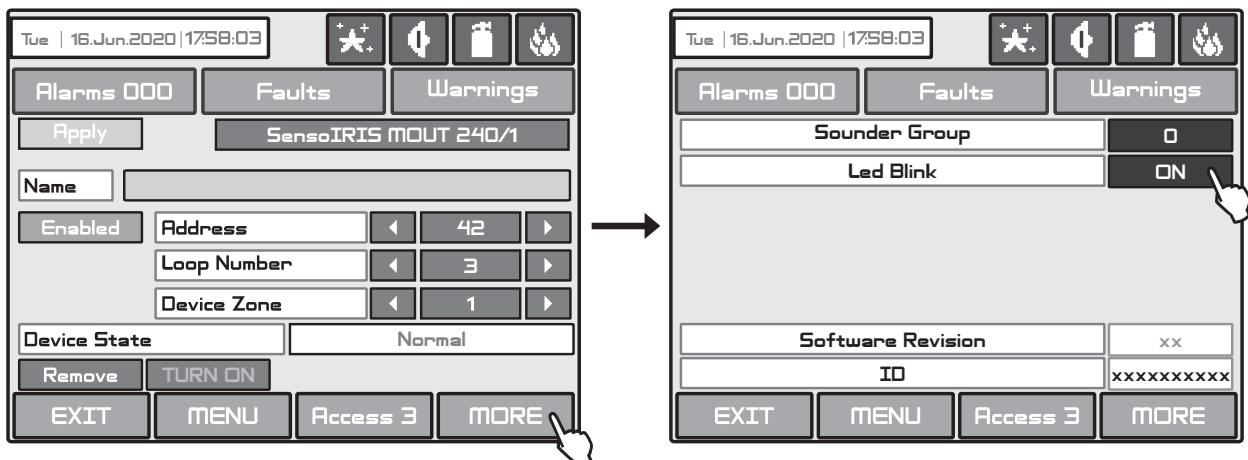
Fig. Screen 10(r) - SensoIRIS MOUT-240 module.

On Fig. Screen 10(r) is shown the SensoIRIS MOUT-240 (relay module for 240VAC interface) settings screen. The module is available in two versions with 1 and 2 relay outputs. Choose the "MORE" button to enter a screen with additional settings:

• *Sounder Group* - Enter a SOUNDER GROUP number to which the module is associated. Set a number from 1 to 96 according system configuration. If the module is not included into group leave "0". See also the example in item 3.4.9.

Note: The sounder group option is applicable for modules, when to one or more of its outputs are connected conventional sounders and the "Sounders Mode" operation is set for the channel.

• *Led Blink* - Button for changing the LED mode: ON Setting - The LED blinks at every query from the station; OFF Setting - The LED does not show the dialogue cycle.

When a channel of SensoIRIS MOUT-240 is defined as OUTPUT, you have to go to menu OUTPUTS to configure its operation (SYSTEM - PROGRAMMING - OUTPUTS) - see the description of the menu in item 3.6.

The channel can be configured also as: ALARM, EVACUATE, RESET or SOUNDERS MODE type. To select a different type for the channel press the button next to the field. On the screen is displayed a list with the mentioned above action types:

- *ALARM* - Activation in case of fire alarm event in the system.
- *EVACUATE* - Activation in case of evacuation event in the system.
- *RESET* - Activation in case of reset in the system.
- *SOUNDERS MODE* - Operation as an addressable sounder. This option is useful for applications where a conventional sounder is connected to the output.

In "Name" field you can enter a specific name up to 40 symbols.
Press the "Apply" button in the main device screen to save the settings.

SensoIRIS MIMIC - Mimic/Synoptic module with 32 LED outputs

(Supported for IRIS panel with SW 6.3.1 and higher)
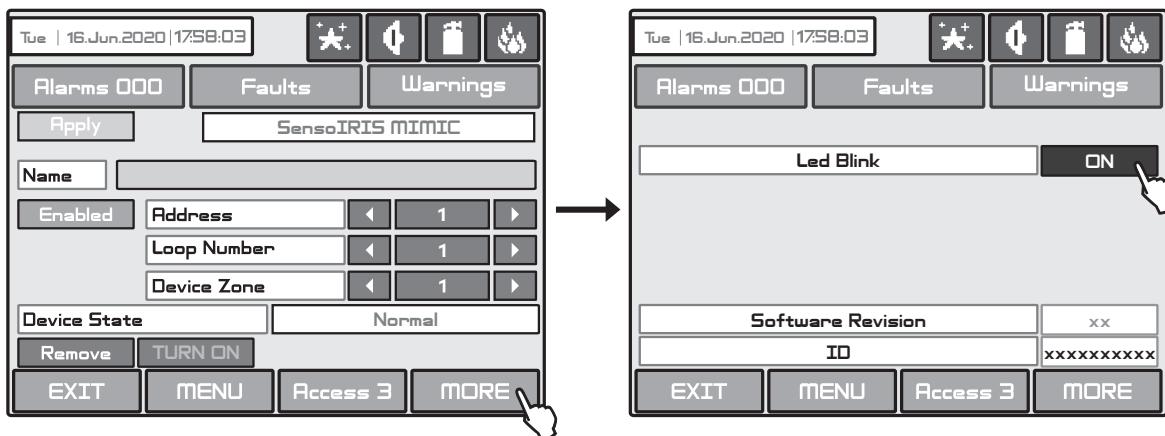
Fig. Screen 10(s) - SensoIRIS MCZ module.

On Fig. Screen 10(s) is shown the SensoIRIS MIMIC addressable module settings screen. The module is specially designed for connection to mimic/repeater panels presenting a geographical plan of the fire alarm system. The module is capable to control up to 32 LED outputs for indication of different events in the fire system, and is provided also with special LED outputs for repeating a FIRE Alarm, Fault and Disablement events directly from the fire alarm control panel. The SensoIRIS MIMIC module must be powered on from an external power supply unit 12-24VDC.

Choose the "MORE" button to enter a screen with additional settings:

• **Led Blink** - Button for changing the LED mode: *ON Setting* - The LED blinks at every query from the station; *OFF Setting* - The LED does not show the dialogue cycle.

To configure the **LED outputs operation** you have to go to menu OUTPUTS (**SYSTEM - PROGRAMMING - OUTPUTS**) - see the description of the menu in item 3.6. The "Output Pulse Type" setting must be set as "CONTINUOUS" or "PULSED" (pulses with 500ms frequency).

SensoIRIS GAS - GAS Detector
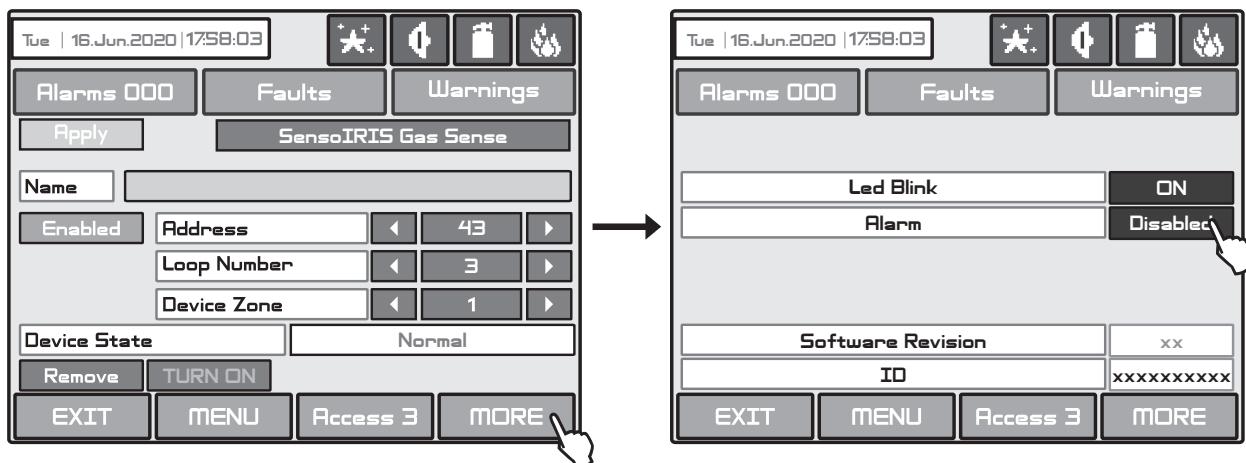
Fig. Screen 10(t) - SensoIRIS GAS detector

SensoIRIS GAS Sense is a gas detector designed for application in addressable fire alarm systems with IRIS fire alarm panels.
SensoIRIS GAS Sense is designed for detection of gas Methane and LPG. The detector is equipped with alarm output for management of manipulator or electromagnetic valve (optional accessories).

Choose the "MORE" button to enter a screen with additional settings:

• **Alarms** - Button for changing enable/ disable the sounders in case of activation of the detector. If DISABLED option is set, the sounders in the system will not be activated in case of activation of the gas detector. If ENABLED option is set, the sounders in the system will be activated in case of activation of the gas detector.

Press the "Apply" button to save the settings.

3.3.3 Addressing of Devices

This menu allows the installer to set or change the device address or to perform self- or auto-addressing procedure. The type of addressing depends on the installer's preferences and the system capacity and configuration.

The installer can use three approaches for adding devices to the system configuration.

• The devices are directly connected to the panel via IRIS TTE Loops. The panel will recognize them and gives automatically addresses according the order of the devices in the line. The panel will start with the first free address in the system configuration. The installer can SAVE the new devices one-by-one or all at the same time with SAVE button from the Programming main screen - Fig. Screen 3.

• **SELF ADDRESSING**. The new devices are prepared for connection to the system configuration - the loop line is ready but the devices are not installed (the detectors and sounders are not mounted to the bases, the call points and modules are not connected to the loop). The installer enters ADDRESSING - START SELF-ADDRESSING menu. The panel shows the first free address for every of the available IRIS TTE loops. Now the installer can start mounting detectors and modules one by-one. The panel will set the displayed address number to the mounted device and automatically proceeds with next free address in the system.

• **AUTO ADDRESSING**. The auto addressing feature of IRIS panel has the purpose to make the installation of the addressable systems easier. By using it the installer could mount all devices without setting address and then do it automatically by a single click in the panel. There are two main ways for auto addressing: by ID number of the devices, and by isolators.

- *Auto Addressing by ID Numbers*. The addressing procedure follows the order of the ID numbers of the devices connected to the line. The order is according the device type starting with fire detectors, sounders, call points and modules at the end.

- *Auto Addressing by Isolators*. This way requires all of the devices connected to the line to have a built-in isolator module. The panel will auto give address to all devices in increasing order from 1 to 250 by following the sequence of their position on the line.

The direction of auto-addressing procedure, according the positive and negative lines of the IRIS TTE Loop expander, is shown on the next connection diagram:
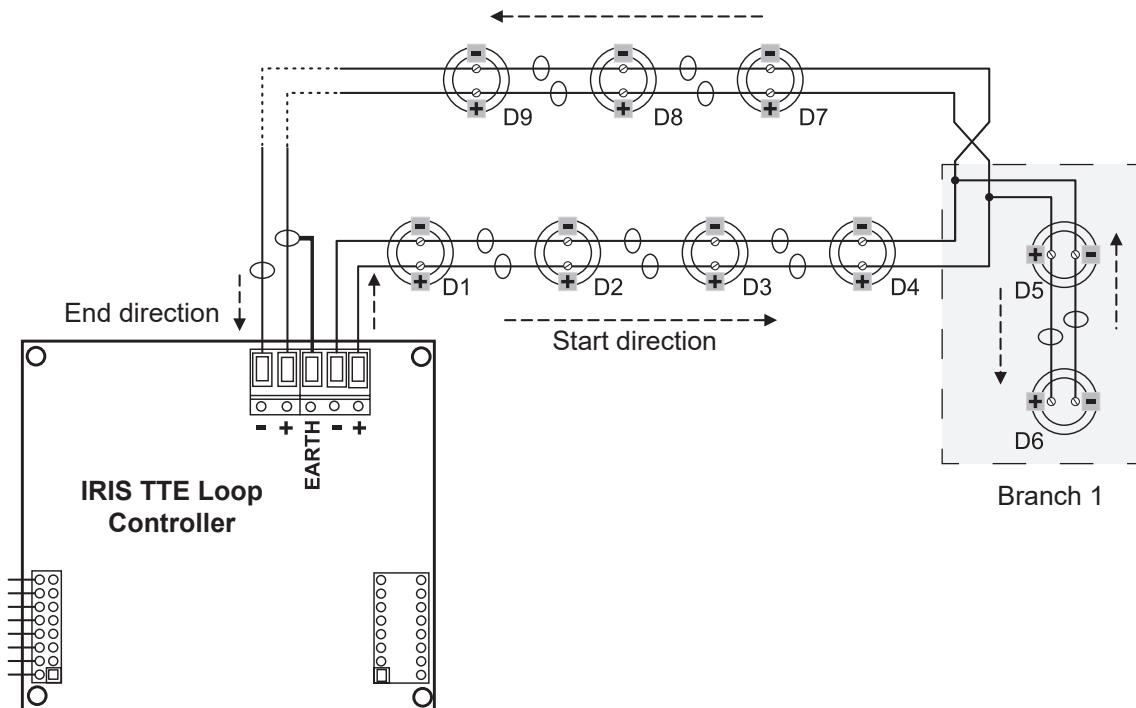
During the auto-addressing procedure the panel begins to address the devices in the loop one-by-one starting from the right positive and negative lines of IRIS TTE Loop following the direction to the right. The addresses in the possible branches on the loop continue the address numbers from the main line to the end of the branch. Then the address numbering continues on the main line and so on.

To enter the addressing menu choose in sequence SYSTEM - PROGRAMMING - DEVICES - ADDRESSING. The screen displays:

Fig. Screen 11.

During any of the ADDRESSING procedures the IRIS panel enters in a special operation mode for addressing devices - the panel is busy and does not follows the operation of the other devices in the system. The addressing mode is visualizing with a icon of a "coffee cup". The menus for reviewing of Alarms, Faults, Warnings, Tests and Disablements are inactive.

3.3.3.1 Set Address Menu

In this submenu the installer can directly set addresses to new devices in the system. The procedure is same with that for self addressing. It is suitable when the installer needs to add single devices to the system configuration at free addresses. The detectors and sounders must not be mounted to the bases; the call points and modules must not be connected to the loop.

To set address to a device, enter in the installer's menu - ADDRESSING - SET ADDRESS. The device must be prepared for connection to the panel.
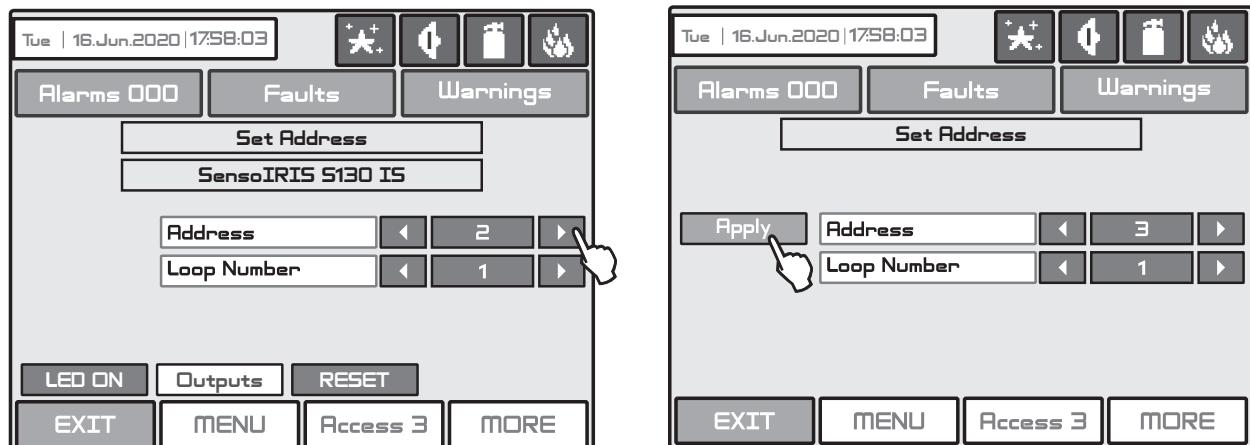
Fig. Screen 12.

The system automatically shows the first address in the system. If the address is assigned the panel will display the devices with it system name. You can check the position of the device assigned at this address with pressing the 'LED ON' button - the device LED(s) will light on permanently. Next pressing of the same button will off the LED(s). Use the arrow buttons to scroll over addresses and loop numbers. The address is free if "Apply" button is active. Take the new device and connect it to the system - mount the detector or siren to the base or connect the module to the loop. Press the "Apply" button and wait for a couple of seconds. If the addressing is successful the message "SUCCESSFUL" is shown on the screen. If the message is "ERROR" then there is a problem - the device is not properly connected; there is no communication with the panel. You can proceed with setting the next address or escape with 'EXIT' button.

You can use the "RESET" button to reset the device condition. The button "Outputs" is active only for modules with relay outputs. Use the button "Outputs" to activate (dark letters) or deactivate (white letters) the module outputs.

3.3.3.2 Change Address Menu

In this submenu the installer can change the address number of a device. To change address of a device, enter in the installer's menu - ADDRESSING - CHANGE ADDRESS.
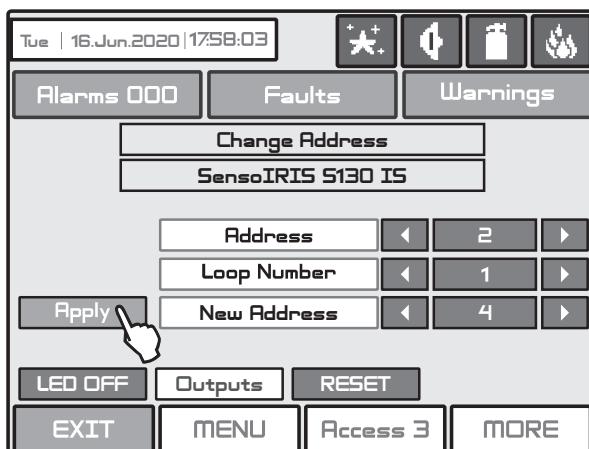
Fig. Screen 12A.

The system automatically shows the first address in the system. Use the arrow buttons to select the address and loop number of the device you want to change. In the field "New address" set the new address number for the device. If the address is free the "Apply" button will appear on the left on the screen.

To change the address press the "Apply" button and wait a couple of seconds. If the address changing is successful the message "SUCCESSFUL" starts blinking on the screen. You can proceed with changing other address or escape with "EXIT" button.

Note: You can change the addresses only of devices connected to one and the same loop number.

You can use the "RESET" button to reset the device condition. The button "Outputs" is active only for modules with relay outputs. Use the button "Outputs" to activate (dark letters) or deactivate (white letters) the module outputs.

3.3.3.3 Self-Addressing Menu

In this submenu the installer can perform self addressing procedure of devices to the system configuration. The self addressing procedure is suitable when there are great amount of devices to be connected to the panel.

The new devices are prepared for connection to the system configuration - the loop line is ready but the devices are not installed (the detectors and sounders are not mounted to the bases; the call points and modules are not connected to the loop).

To perform self addressing, enter in the installer's menu - ADDRESSING - START SELF ADDRESSING. The panel shows the first free address for every of the IRIS TTE loops. Now the installer can start mounting detectors and modules one by-one. The panel will set the displayed address number to the mounted device and automatically proceeds with next free address in the system.

The self-addressing menu shows information about the total number of devices connected to every loop.

In the "Next Address" field the panel shows the first free address for every of the loops. The panel skips all already set address numbers and will jump to the next free address number. You can scroll over the address number using the arrows or directly enter a digits via the keypad.

In self-addressing mode the panel waits for connecting the device to the loop, automatically sets the current address to the device and moves to the next free address number. With every one added device to the system configuration the address count will increasing to show the total number of devices connected to the respective loop.

The exit of the menu is with pressing the 'EXIT' button.

3.3.3.4 Auto-Addressing Menu

In this submenu the installer can perform auto-addressing procedure using two methods: auto-addressing by ID numbers or auto-addressing by isolators. The time to perform auto-addressing depends on the system configuration and total number of devices connected to the loops. The status of the auto-addressing is displayed with a process bar at the bottom of the screen.
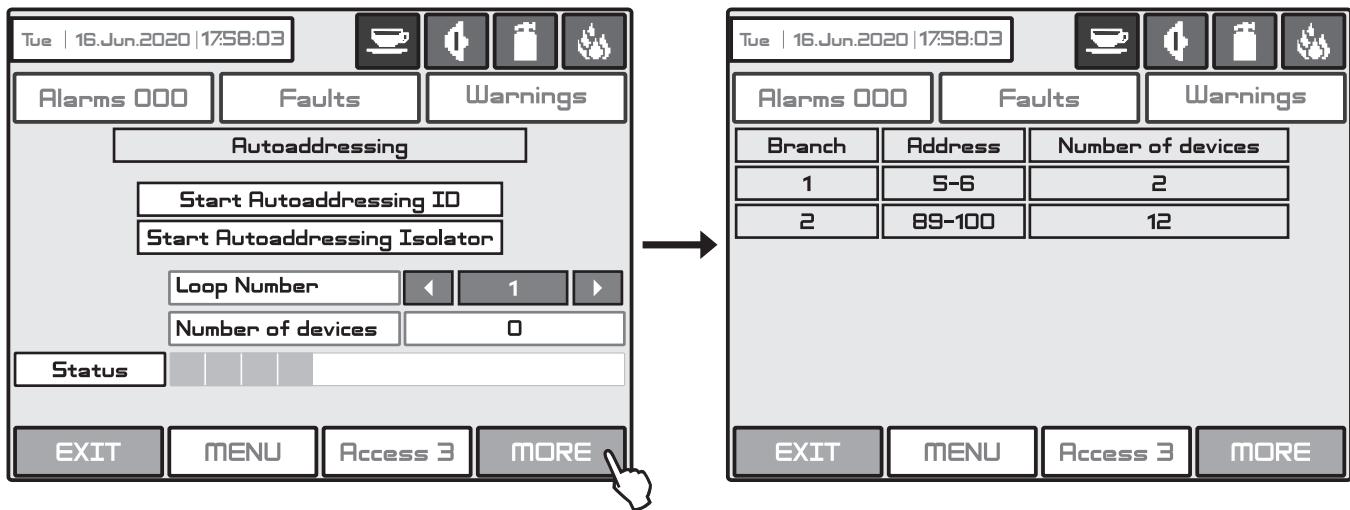
Fig. Screen 13.

At the beginning the installer must enter the number of the loop for auto-addressing in the "Loop Number" field. The number of addressed devices will be displayed in the "Number of devices" field.

To start auto-addressing by ID numbers in the selected loop number, press the "Start Autoaddressing ID" button. The system enters in a addressing operation mode and will idle till the end of the process. The found branches are displayed in a table at separate screen accessible after pressing MORE button.

To start auto-addressing by ISOLATOR in the selected loop number, press the "Start Autoaddressing Isolator" button. For the correct addressing using this method it is necessary all connected to the loop devices to be with built-in isolator module.

3.3.3.5 Loop Zero Address Menu

This is a special menu for quick finding of devices with set "0" (Zero) address. The "0" address is invalid and must be changed with other valid address in the addressable system configuration. This is a rare situation but it is possible to happen during addressing a big amount of devices or other reasons.

If a "0" address is detected for a device the panel will announce that with a fault message "Loop Zero Address". The "General Fault" LED is lighting on.
To find the devices with "0" address, the installer has enter in the installer's menu - ADDRESSING - LOOP ZERO ADDRESS. The system enters in a testing mode and will idle till exiting this menu.
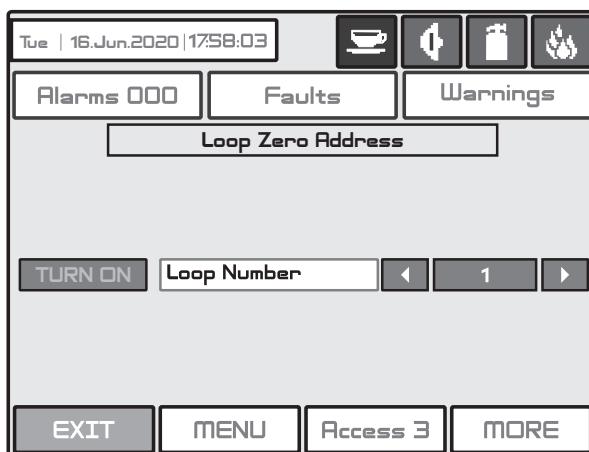
Fig. Screen 13A.

In the "Loop Number" enter the number of the tested loop. The system automatically starts with the first loop. The Zero Address Test will be performed to the loop number which is currently selected on the screen.
The loop is available for test when the "TURN ON" button is active on the left side.

To start the test press the button - it will change to "TURN OFF" (white letters). The LEDs of all devices with invalid "0" address will light on permanently. The sounders without LED indication (WSOU, WSOU IS, BSOU, BSOU IS) will be activated. In this way the installer can find the actual location of the devices and to program a real address in the system configuration according the exact application. Note, the mini module SensoIRIS MINP M has no LED or sound indication to test for "0" address presence.

To end the test, press the button to "TURN ON" position (black letters) or press 'EXIT' button.

3.4 Zones

Choose in sequence from the Main menu screen **System - Programming - Zones.**

Up to 96 zones are available for operation in IRIS addressable fire alarm panel. The **FIRE** and **PREALARM** conditions are indicated by the help of the LED of the corresponding zone. In the **PREALARM** condition - the respective zone LED blinks and a warning message is displayed on the screen. If there is a second activation of devices in the same zone an alarm message FIRE is generated for the respective zone - the number of the zone in fire alarm mode is lighting on in red. To enter the submenu for zone configuration, chose "**Zones**" button from Programming menu - Fig. Screen 3. The general view of the zone configuration menu is shown on Fig. Screen 14.
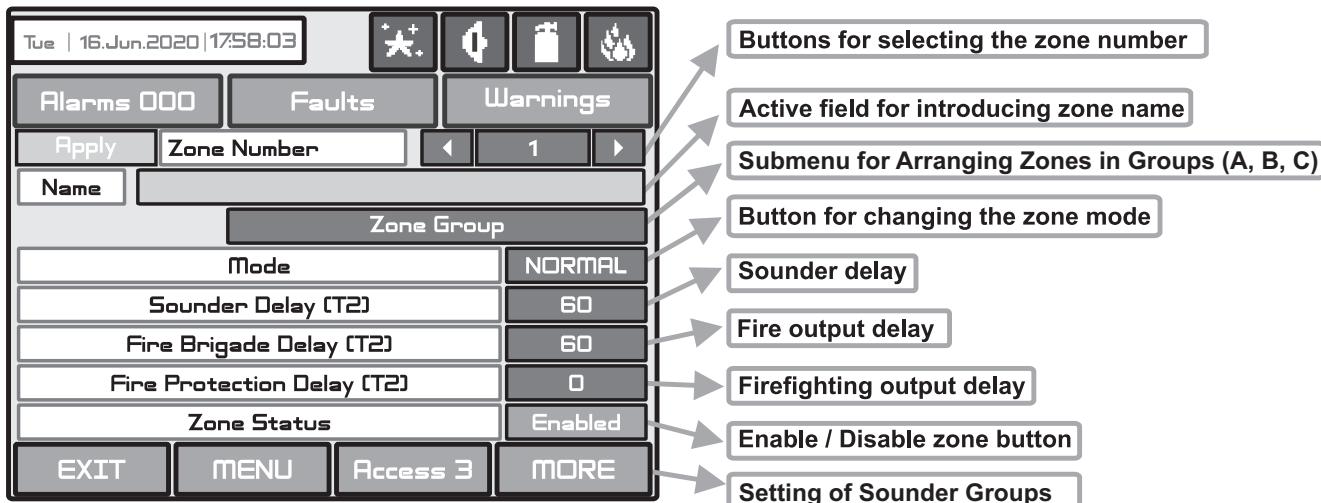
Fig. Screen 14.

3.4.1 Button for Selecting the Zone Number

The zone number can be selected in sequence (using the left and right arrow buttons) or directly via virtual keyboard.

3.4.2 Active Field for Introducing Zone Name

Choose the button to enter the screen (Fig Screen 9), for introducing the zone name, which shall not exceed 40 digits together with the spaces. Verify the information with the ⬅ button.

3.4.3 Arranging Zones in Group

The zones in IRIS addressable fire alarm panel can be organized for operation in separate groups. One zone can be associated up to 3 different groups in the system. It is recommended to arrange the Zone Groups according the system organization in advance.

The maximum number of the permissible groups is 48. By default, all zones are not associated to a group number – value "0" is set. To enter in the submenu for group setting, press "Zone Group" field. The screen displays:

Fig. Screen 14A.

In the fields "ZONE GROUP A/B/C" set the number of the group from 1 to 48.
Exit to the main screen of ZONES menu is realized with EXIT button.

3.4.4 Button for Zone Mode Change

Each zone has three working modes: **NORMAL**, **2DEVICES** and **DOUBLE**.

• In **NORMAL** mode any detector activation within the system generates an alarm event to the respective zone.

• In **2 DEVICES** mode any detector activation within the system generates a PREALARM event to the respective zone, but also awaits the activation of another detector from the same zone to generate a FIRE signal. The RESET command shall disable the FIRE and PREALARM events. If during 4 and one quarter minutes there is no other fire alarm signal from other detector in the zone the FIRE alarm will be ignored.

• In **DOUBLE** mode any detector activation within the system generates a PREALARM event to the respective zone, but will awaits a second fire signal from the same detector to generate a FIRE signal. The RESET command shall disable the FIRE and PREALARM events. If during 4 and one quarter minutes there is no other fire alarm signal from the same detector in the zone the FIRE alarm will be ignored.

NOTE: The manual call points and input modules set to generate an Alarm event will be reset automatically if they are attached to a zone with set DOUBLE operation mode.

3.4.5 Sounder Delay (T2)*
The delay can be within an interval of 0-540 sec.
In case of activation of more than one zone, the delays to the outputs are caused by the zone with shorter delays.

3.4.6 Fire output Delay (T2)*
The delay can be within an interval of 0-540 sec.
In case of activation of more than one zone, the delays to the outputs are caused by the zone with shorter delays.

3.4.7 Fire protection Output Delay (T2)*
The delay can be within an interval of 0-540 sec.
In case of activation of more than one zone, the delays to the outputs are caused by the zone with shorter delays.

* Note: T2 presents time for individual output delay setting for a zone. See APPENDIX E - Two steps of alarming algorithm. Attention: If no delay is set for a T2 time - Sounder, Fire Output or Fire Protection Output (T2 = 0 sec), the introduced common delay T1 is ignored also for activation from that zone. For example, if the "Sounder Delay (T2)" = 0 sec for Zone 1, then the set T1 time delayed will be ignored and the output is activated immediately in case of Fire alarm event for that zone.

3.4.8 Enable/Disable Zone Button
Button for Enabling / Disabling zones. *Note: The enabling/disabling of zones is possible also through Access Level 2, as the user access it via menu System-Maintenance-Disable-Zones.*

3.4.9 Programming of Sounder Groups
The arranging of all sounders attached to a single zone in a common Sounder Group is an option that helps for better management of the evacuation process at the protected site in case of fire alarm condition. To every zone number can be attached up to 3 other Sounder Groups (which belong to other zones). In case of fire alarm condition, will be activated not only the sounders in the respective zone but also and the sounders in the associated to it Sounder Groups (A, B, C). The installer can organize up to 96 separate Sounder Groups in a fire alarm system build with IRIS panel. It is recommended to arrange the Sounder Groups according the respective zone numbers in advance.
To set additional Sounder Groups to a zone number, press MORE button.
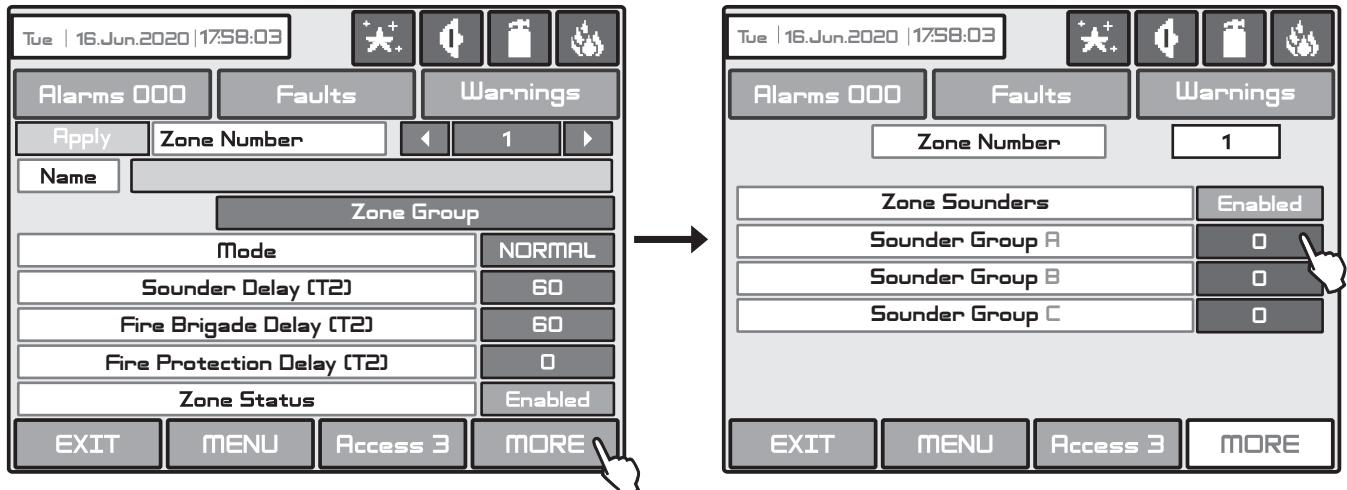
Fig. Screen 14B.

• **Zone Sounders** - Set the operation of the sounders associated to the respective zone number (the one actually displayed in the submenu - number 1 in Fig. Screen 14B). The zone number is associated in the individual programming menu of every device – see item 3.3.2, Fig. Screen 9(a).

The operation of Zone Sounders depends on the selected setting - Enabled or Disabled:

- ***When the ZONE SOUNDERS are ENABLED***, in case of fire alarm event in the respective zone, the sounders in the set Sounder Groups (A, B, C) will be activated together with the sounders associated to that same zone.

- ***When the ZONE SOUNDERS are DISABLED***, in case of fire alarm event in the respective zone, ONLY the sounders in the set Sounder Groups (A, B, C) will be activated and the zonal sounders will not be activated (the sounders associated to that same zone). *Note: The zonal sounders will be activated (in Zonal Mode Disabled) if they are included to a Sounder Group set for the respective zone.*

When ZONE SOUNDERS DISABLED and a "0" is set for all of the Sounder Groups, then there will be no sound signalization in case of fire alarm from the respective zone.

• **Sounder Group (A, B, C) -** Enter a sounder group number from 1 to 96 according the system configuration.

Example: Offices A and B are sharing a common corridor in a floor plan of a building. All attached sounders to the Zones are arranged into separate Sounder Group numbers. In case of a fire alarm condition in Zone 1, the sounders in Zone 2 and 3 will be also activated, when the Zone Sounders are enabled and the two other Sounder Groups numbers are set in the Sounder Group fields (for Zone 1). The same is organized for Zones 2 and 3.
It is recommended to arrange the Sounder Groups and to associate the sounders to the respective zone numbers in advance.
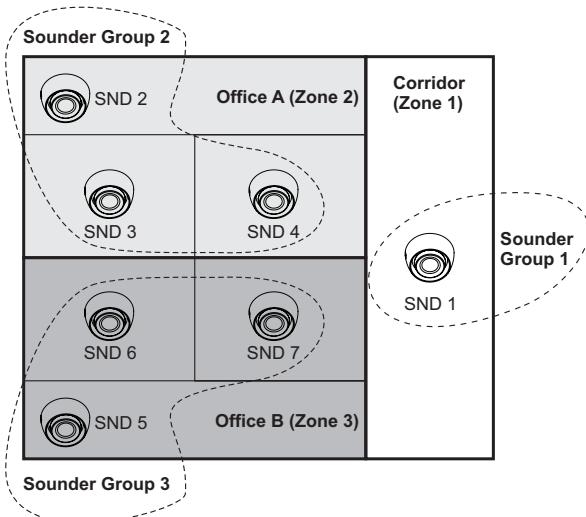
Zone No	Sounder Group No (for a Sounder)	Sounder No	Panel Settings (Sounder Group menu)
1	1	SND1	Sounder Group A: 2 Sounder Group B: 3 Sounder Group C: 0
2	2	SND 2 SND 3 SND 4	Sounder Group A: 1 Sounder Group B: 3 Sounder Group C: 0
3	3	SND 5 SND 6 SND 7	Sounder Group A: 1 Sounder Group B: 2 Sounder Group C: 0

Note: The used numbers for Sounder Groups and Zones in the example are illustrative. It is not required the numbers for Sounder Groups and Zones to match. This approach is used to make the presented example clearer.

3.5 Inputs

To enter the submenu for inputs configuration, choose **"Inputs"** button from Programming menu – Fig. Screen 3. The menu includes two submenus: **"Inputs"** and **"Groups"**. Choose the submenu **"Inputs"** to enter in the settings configuration of the inputs - Fig. Screen 15.
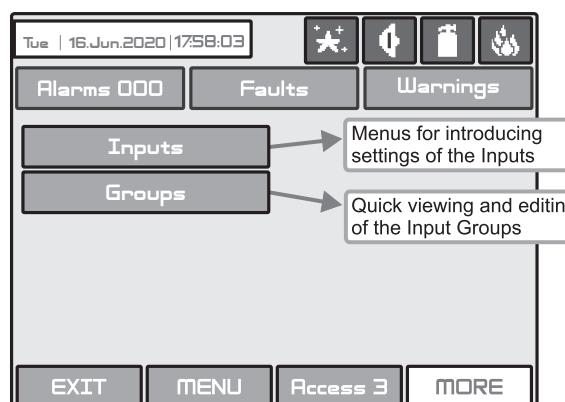
Fig. Screen 15

Press **"Inputs"** button to enter the submenu for introducing of settings for the inputs.
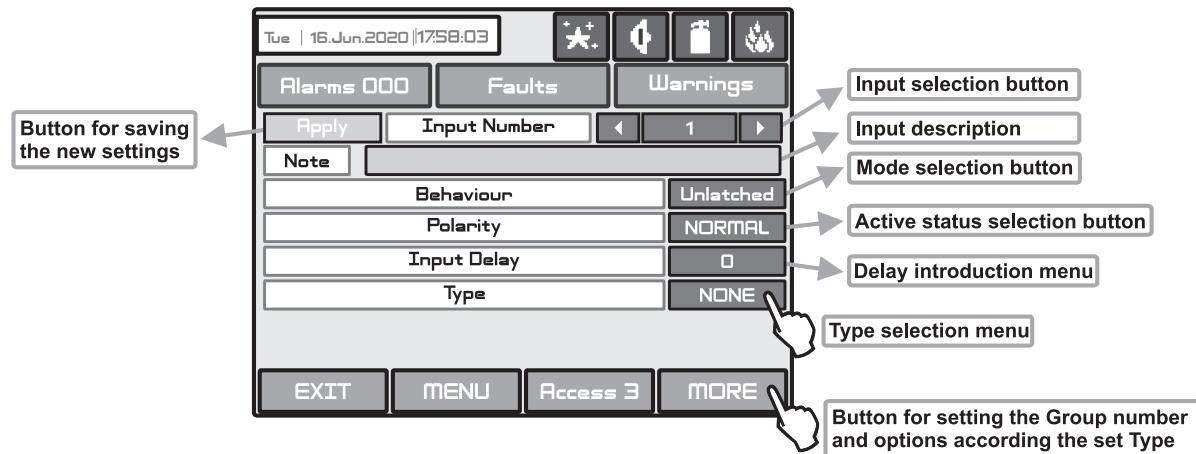
Fig. Screen 15(a) – Menu for introducing parameters of the inputs.

3.5.1 Field "Input Number"

Use the arrow buttons, or enter the input number, to select a number of an input from 1 to 250. The screen content may change according the settings for Input Type. By default all Inputs are set as NONE Type.

3.5.2 Field "Note" - Description of the Input

Enter a text description of the Input up to 40 symbols.

3.5.3 Behavior

LATCHED - Once activated, the input stays active until RESET.
UNLATCHED - monitors the status.

3.5.4 Input Active Status (Polarity)

INVERTED - the output is set at ON, when the result of the logical function is FALSE.
NORMAL - the output is set at ON, when the result of the logical function is TRUE.

3.5.5 Input delay

The delay can be within the interval 0–600 sec.

Tip: Press regularly the "Apply" button to save the introduced changes to the Inputs menu. The "Apply" button is shown at every change of an option. If you leave the Inputs menu without pressing the "Apply" button the current settings will not be saved.

3.5.6 Type Selection Menu

By pressing the button for input type a new screen is displayed for selecting one of the following input types:

NONE	Loop	Zone	Alarms
Time	Date	Action	General
Network	Zone Group	Device Group	

After choosing the desired type it is introduced in the Type field of the screen - Fig. Screen 15(a).

The Input Types have the following meaning:
- **NONE** - The input is not used.
- **Loop** - Select this option when the input is an input terminal of a loop device, as MIO-22, MIO-40, MINP M, etc.
- **Zone** - Select this option when the input will be activated from a zone event.
- **Alarms** - Select this option when the input will be activated from a encountered number of alarms.
- **Time** - Select this option when the input will be activated on a time schedule.
- **Date** - Select this option when the input will be activated at a time period.
- **Action** - Select this option when the input will be activated from an action event.
- **General** - Select this option when the input will be activated from a general event.
- **Network** - Select this option when the input will be activated from a network device (panel/repeater number).
- **Zone Group** - Select this option when the input will be activated from a zone in fire alarm or fault, included in a group.
- **Device Group** - Select this option when the input will be activated from a device included into a group.

3.5.7 Submenus for setting of Input Type parameters

Depending on the selected type of the input, after choosing the button **MORE** could be programmed different parameters. The information is displayed on a separate screen.

The common setting for all Input Types is selecting a Group number. The inputs can be organized to groups according their operation. *Note: By default the Input 1 is set to Group 1, Input 2 is set to Group 2, etc. The installer can reorganize the Group numbers according the system requirement and configuration.*

3.5.7.1 LOOP Type - Loop Input Parameters

Select this option when the input is an input terminal of a loop device. The devices with available inputs from the SensoIRIS series are MIO-22, MIO-22M, MIO-40, MINP M (the input terminals are displayed as Channel numbers - see the detailed descriptions of the modules at item 3.3.2). Choose the **MORE** button.

The following settings for loop device with inputs are available (SensoIRIS MIO22 in the example below):

- *Group.* Enter a Group number from 1 to 250.
- *Loop device address*. Enter an address number from 1 to 250.
- *Loop number*. Enter the loop number.
- *Channel*. Enter a number of an input accessible in the device. The available input numbers are displayed enclosed in brackets.
- *Sabotage.* When the option is enabled (ON setting) the set input is activated in case of fault condition. This will generate a Fault type message for the output, where the input group number is used.

Note: The modules with inputs SensoIRIS series - MIO-22, MIO-22M, MIO-40, MINP M - are displayed with the available inputs. If the device is a detector, call point or a conventional zone module, the panel will show only one channel for it which is not available for programming.

The following messages on the screen may appear to alert the installer for problems:

- ***"This device can not be used as Input!"*** *- That means the device, or the set channel, cannot be used for operation as input. The message will be displayed if the set address is of a device type SensoIRIS MOUT, MOUT-240, MIO-04 or channels 3 and 4 for MIO-22 and MIO-22 M modules.*

- ***"Already used!"*** *- That means the device, or the set channel, is already set for other operation into the system configuration.*

3.5.7.2 ZONE Type - Zone Input Parameters

Select **Zone Type** option when the input will be activated from a zone event. Choosing the **Zone** type for an input number will add a new field **Function** - Fig. Screen 16. After choosing this field the possible zone events will be displayed on the screen.
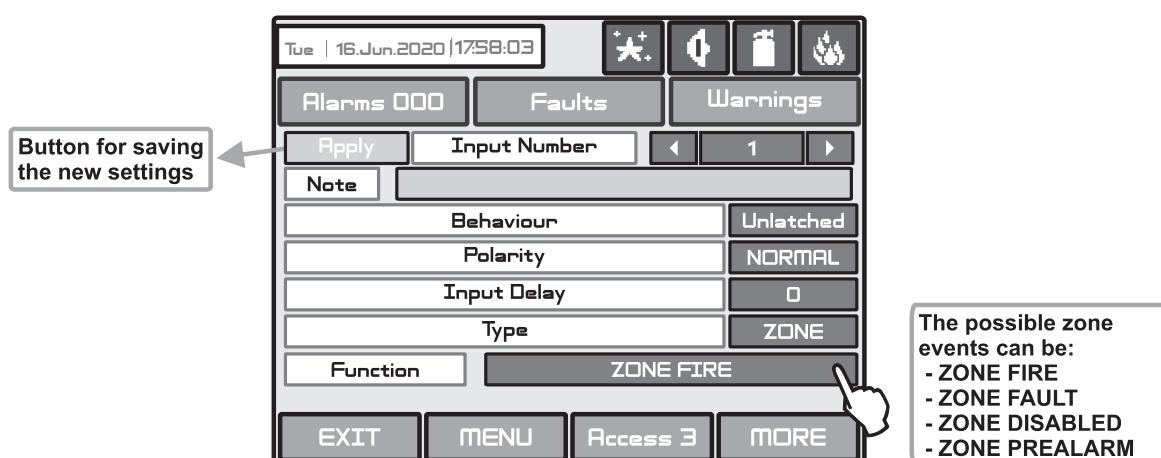
Fig. Screen 16 - Menu for zone events introducing.

Choose the **MORE** button. The following settings are available for setting:

- *Group.* Enter a Group number from 1 to 250.
- *Zone number.* Enter a zone number from 1 to 96.

3.5.7.3 ALARMS Type - Zone Input Parameters

Select **Alarms Type** option when the input will be activated from a encountered number of alarms from a zone number. Choose the **MORE** button. The following settings are available for setting:

- *Group.* Enter a Group number from 1 to 250.
- *Zone number.* Enter a zone number from 1 to 96.
- *Alarms Counter.* Enter a zone number from 1 to 9. When the alarms counter set number is reached for the set zone number, the input will be activated.

All changed parameters are confirmed and saved by pressing the APPLY button in the upper left corner of the Inputs menu screen.

3.5.7.4 TIME Type - Time Input Parameters

Select **Time Type** option when the input will be activated on a time schedule.
Choose the **MORE** button. The following settings are available for setting:

- *Group.* Enter a Group number from 1 to 250.
- *Time - hour.* Set an hour for activation from 00 to 23. Press the button next to the field and enter the hour via the keyboard. Confirm with OK button.
- *Time - min.* Set minutes for activation from 00 to 59. Press the button next to the field and enter the minutes via the keyboard. Confirm with OK button.
- *Time - day of week.* Set the days of the week for activation. Press the **Change** button next to the field - the days of the week are listed in a separate screen. Enable (ON setting) those days of the week when the input has to be activated.

Use the EXIT button to go back to the Inputs main menu and save the settings by pressing the APPLY button.

3.5.7.5 DATE Type - Date Input Parameters

Select **Date Type** option when the input will be activated at a time period.
Choose the **MORE** button. The following settings are available for setting:
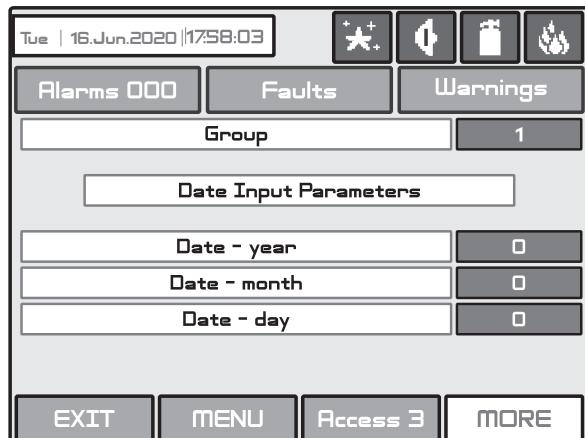
- *Group*. Enter a Group number from 1 to 250.
- *Date - year*. Set an year for activation.
- *Date - month*. Set a month for activation.
- *Date - day*. Set a day of the month for activation.

For the settings, press the button next to the field and enter the of the year, month or day via the keyboard. Confirm with OK button.

3.5.7.6 ACTION Type

Select **Action Type** option when the input will be activated from an action event. Choosing the **Action** type of the input will add a new field **Function** - Fig. Screen 17. The possible action events are:
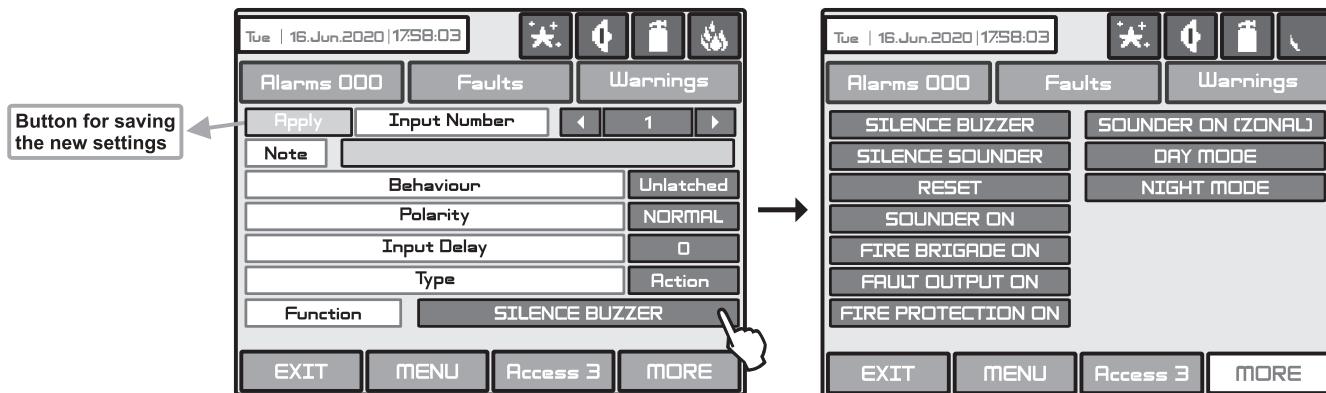
Fig. Screen 17 - Menu for action events introducing.

The activation events have the following meaning:

- **SILENCE BUZZER** - Activation in case of silencing the buzzer in the system.
- **SILENCE SOUNDER** - Activation in case of silencing the sounders in the system.
- **RESET** - Activation in case of reset in the system.
- **SOUNDER ON** - Activation in case of sounders activation in the system.
- **FIRE BRIGADE ON** - Activation in case of Fire Brigade monitored output activation.
- **FAULT OUTPUT ON** - Activation in case of Fault monitored output activation.
- **FIRE PROTECTION ON** - Activation in case of Fire Protection monitored output activation.
- **SOUNDER ON (ZONAL)** - Activation in case of sounder activation in a zone.
- **DAY MODE** - Activation in case of switching to DAY Operation mode.
- **NIGHT MODE** - Activation in case of switching to NIGHT Operation mode.

To enter a Group number for Action type input, press MORE button.

3.5.7.7 GENERAL Type

Select **General Type** option when the input will be activated from a general event. Choosing the **General** type of the input will add a new field **Function** - Fig. Screen 18. The possible general events are:
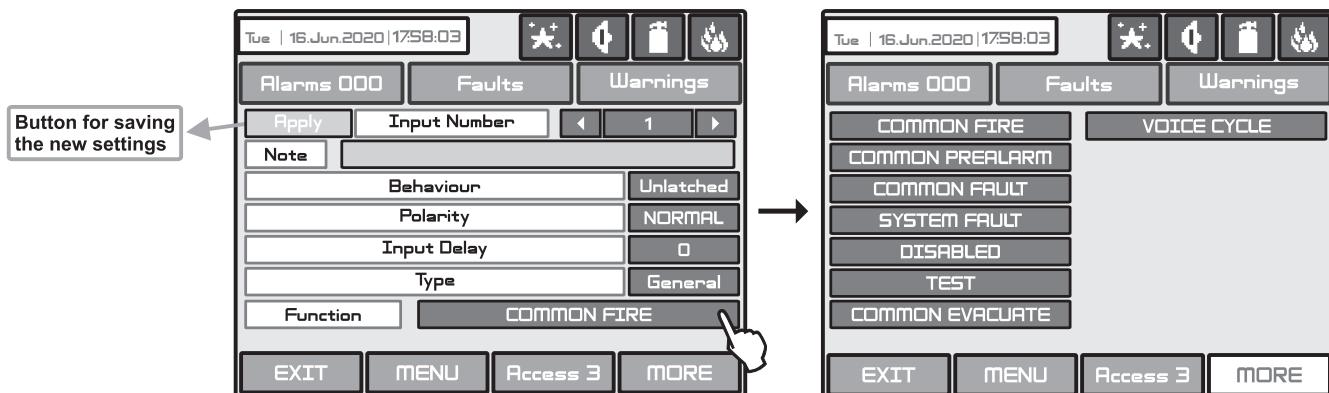
Fig. Screen 18 - Menu for general events introducing.

The general events have the following meaning:

>   - **COMMON FIRE** - Activation in case of Fire Alarm event in the system.
>   - **COMMON PREALARM** - Activation in case of PreAlarm event in the system.
>   - **COMMON FAULT** - Activation in case of Fault Alarm event in the system.
>   - **SYSTEM FAULT** - Activation in case of System Fault event in the system.
>   - **DISABLED** - Activation in case of disablement (of loop device operation, zones, outputs, panel's event indi-

cation) in the system.

>   - **TEST** - Activation in case of Test procedure in the system.
>   - **COMMON EVACUATE** - Activation in case of Evacuation event in the system.
>   - **VOICE CYCLE** - Activation in case of started "EVACUATION CYCLE ON" time and deactivation in case

started "EVACUATION CYCLE OFF" time (the ON and OFF parameters are set in the EVACUATION submenu (in the SOUNDERS MODE menu - button MORE) – see item 3.7.4

To enter a Group number for General type input (from 1 to 250), press MORE button.
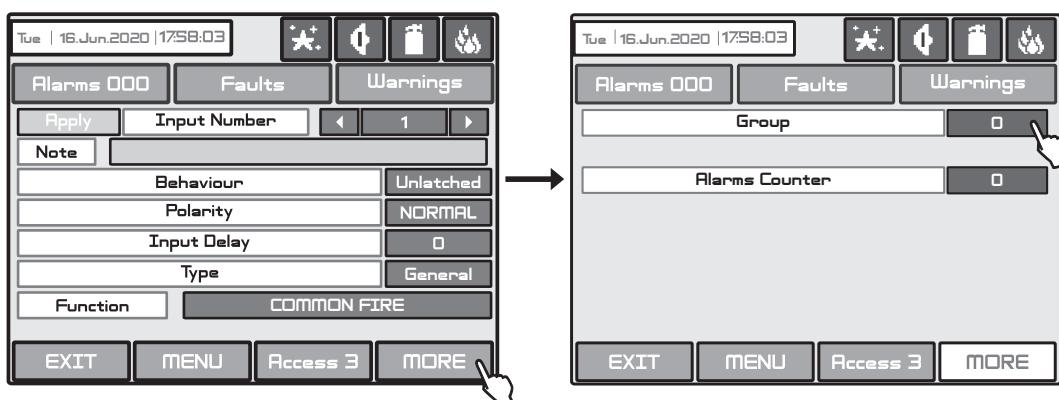
Fig. Screen 18A

In the next screen you will able also to set ALARMS COUNTER option (*accessible for COMMON FIRE general type activation events*). In the field you can enter a number (1-9) of registered fire alarms, when after reaching their count the output will be activated.

3.5.7.8 NETWORK Type - Network Input Parameters

Select **Network Type** option when the input will be activated from a network device (panel/repeater number).
Choose the **MORE** button. The following settings are available for setting:
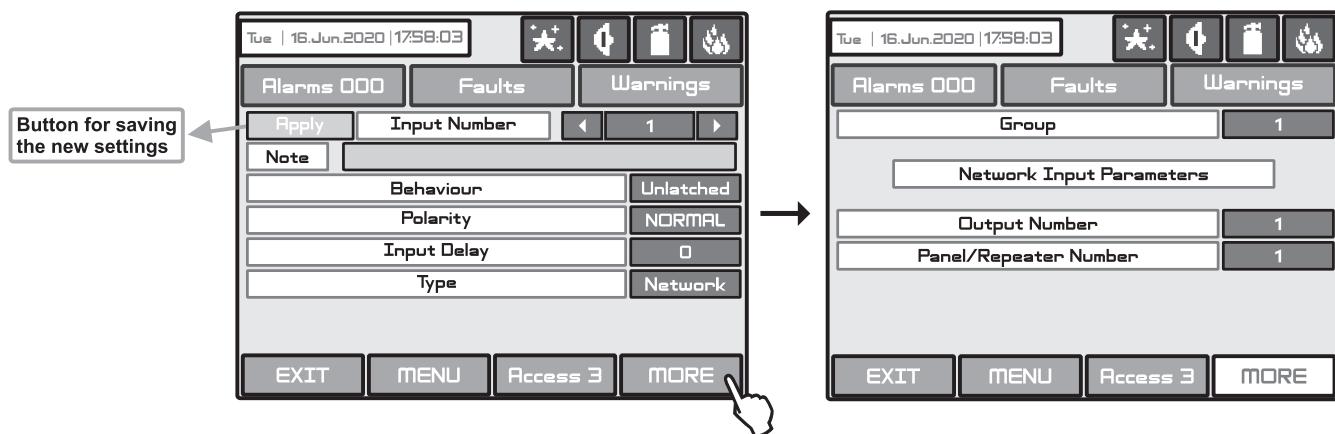
- *Group.* Enter a Group number from 1 to 250.
- *Output Number*. Enter a number of an output from 1 to 250.
- *Panel/Repeater Number*. Enter a number of panel or repeater from 1 to 64.

For the settings, press the button next to the field and enter a number via the keyboard. Confirm with OK button.
Use the EXIT button to go back to the Inputs main menu and save the settings by pressing the APPLY button.

3.5.7.9 ZONE GROUP Type - Zone Group Input Parameters

Select **Zone Group Type** option when the input will be activated from a zone in fire alarm or fault, included in a group.
Choosing the **Zone Group** type of the input will add a new field **Function** - Fig. Screen 19. The possible zone group events are:
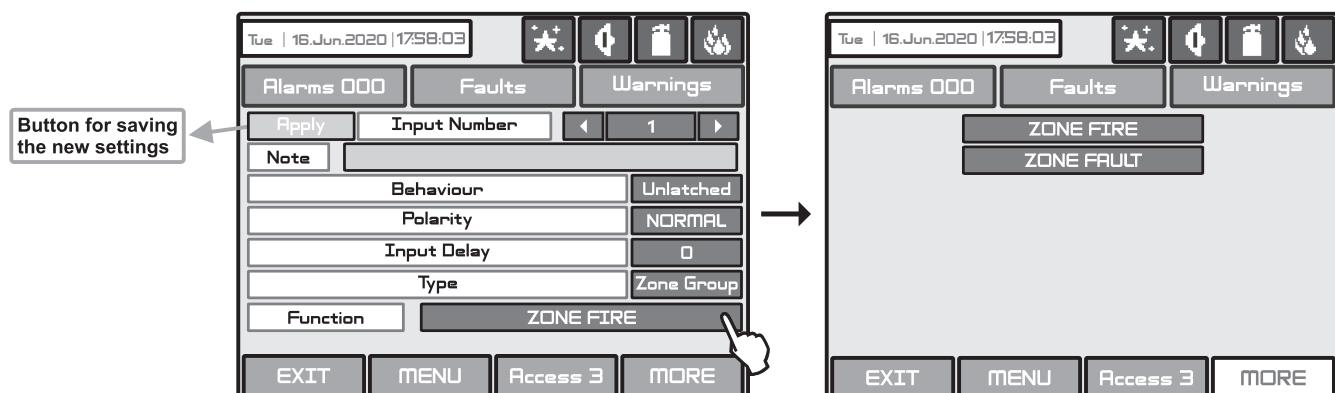
Fig. Screen 19 - Menu for zone group parameters.

The activation events have the following meaning:
  - **ZONE FIRE** - Activation from a zone in fire alarm included in a group.
  - **ZONE FAULT** - Activation from a zone in fault included in a group.

Choose the **MORE** button. The following settings are available for setting:
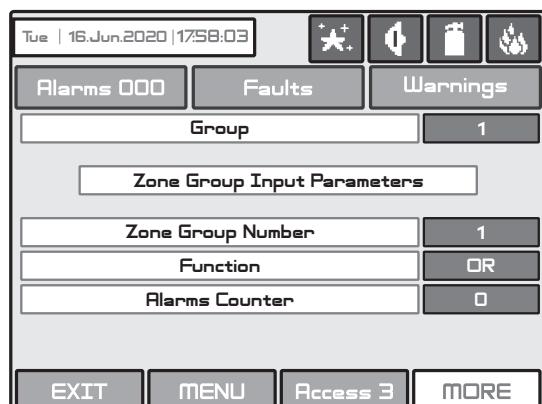
- *Group.* Enter a Group number from 1 to 250.
- *Zone Group Number*. Enter a zone number from 1 to 48.
- *Function*. Set the logic for operation OR/AND.
- *Alarms Counter.* Set a number (1-9) of registered fire alarms, when after reaching their count the output will be activated.

3.5.7.10 DEVICE GROUP Type - Device Group Input Parameters

Select **Device Group Type** option when the input will be activated from a device, included in a group. Optional settings are available after pressing MORE button:
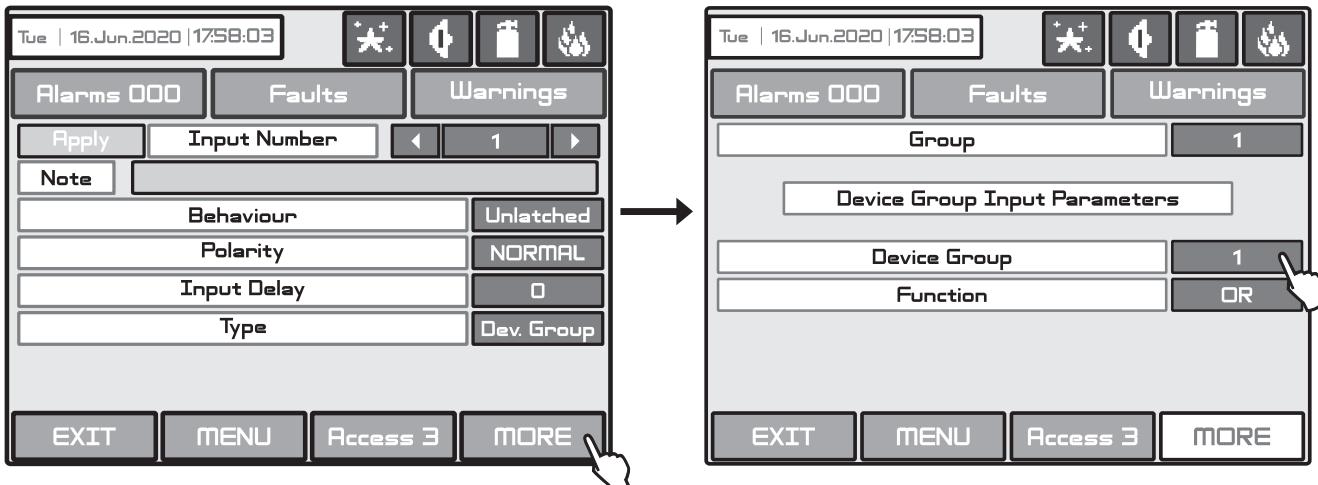
The following settings are available for setting:
- *Group.* Enter a Group number from 1 to 250.
- *Device Group*. Enter a device group number from 1 to 100.
- *Function*. Set the logic for operation OR/AND.

Confirm the settings with the "Apply" button in the main Inputs screen.

3.5.8 Reviewing and Editing of Input Groups
This a menu for quick reviewing and editing the group numbers set for the inputs. To enter the Inputs Group menu press **"Groups"** button:
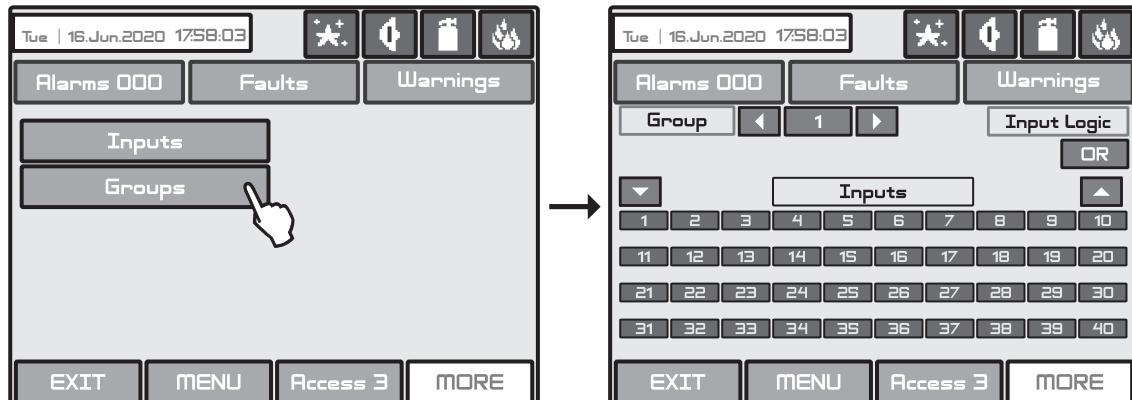
Fig. Screen 20 - Input Groups Menu.

At the screen are represented the input numbers, a Group number and the current set Input Logic operation.

- *Input Numbers*

The input numbers are represented with a small buttons with two states: *enabled* (light grey background) and *disabled* (dark grey background). Every pressing of the button changes it current state. The *enabled inputs* are associated to the current set *group number.* All the changes must be confirmed with the "Apply" button to be saved in the system configuration. Up to 40 input numbers can be displayed on the screen on the same time. To review all the input numbers, use the up and down arrow buttons.

- *Group Numbers*

The group numbers can be scrolled with left and right arrow buttons. The user can also enter the group number directly via the virtual keyboard with pressing the button in the middle. With changing the group number the map with enabled inputs for it is displaying on the screen. *Note: Do not forget to review all the enabled inputs for a group with the up and down arrow buttons.*

- *Input Logic*

Use the button to define the logic of operation of the inputs enabled to a group - OR/AND function. The changes must be confirmed with the "Apply" button.

Example for settings for Input Groups menu:

Button for saving the new settings
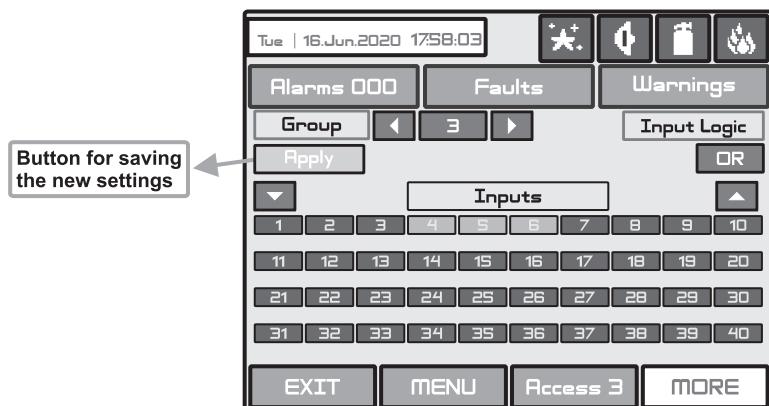
The Inputs with numbers 4, 5 and 6 are associated to Group 3 and will operate in OR logic. The OR logic function means that when any of the input is activated then the group will be activated.

For example, if 4, 5 and 6 inputs associated to MINP M modules, located into one large area, but in different places, they are organized in one Group (Group 3), and in case of activation of any of the modules (OR logic), the Group is activated also.

3.6 Outputs

To enter the submenu for outputs configuration choose "**Outputs**" button from Programming menu - Fig. Screen 3. The general view of the menu for outputs configuration is shown on Fig. Screen 21.

- Output selection button
- Output description
- Mode selection button
- Active status selection button
- Delay introduction menu
- Pulse type selection menu
- Output type selection menu
- Menu for selection of the inputs, controlling the outputs
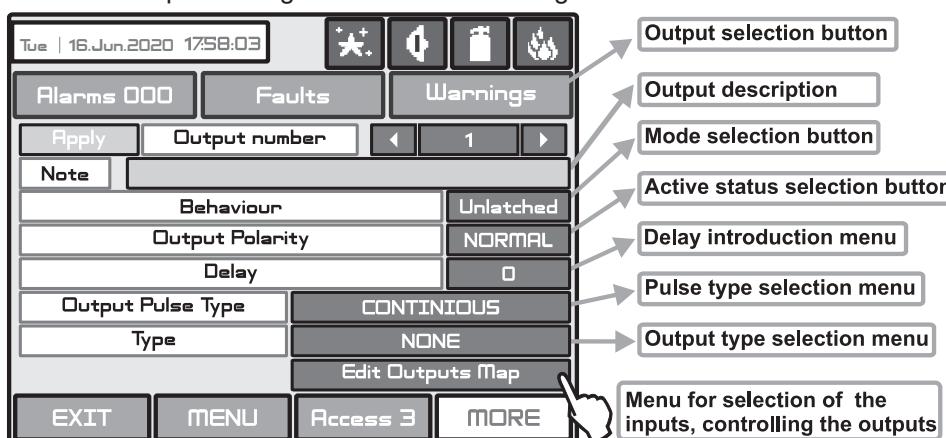
Fig. Screen 21 - Menu for introducing output parameters.

3.6.1 Field "Output Number"
Use the arrow buttons, or enter the output number, to select a number of an output from 1 to 250. The screen content may change according the settings for Input Type. By default all Inputs are set as NONE Type.

3.6.2 Field "Note" - Description of the Output
Enter a text description of the Output up to 40 symbols.

3.6.3 Behaviour (Mode)
- *LATCHED* - Once activated, the output stays active until RESET.
- *UNLATCHED* - Monitors the status.

3.6.4 Output Active Status (Polarity)
- *INVERTED* - the output is set at ON, when the result of the logical function is FALSE.
- *NORMAL* - the output is set at ON, when the result of the logical function is TRUE.

Note: *This field is programmable only for output types Periphery and Loop.*

3.6.5 Output Delay
The delay can be within the interval 0–600 sec.

3.6.6 Pulse Type
- *CONTINUOUS* - the output signal is continuous
- *PULSED* - the output signal is a pulse signal (3 sec. ON / 3 sec. OFF)
- *ONE PULSE* - the output signal is a pulse with a programmable duration from 0 to 250 seconds.

Note: ONE PULSE must be used in the case of ACTION type activating input or else the activating input must be LATCHED or the output LATCHED.

3.6.7 Type of output
By pressing the button for output type a new screen is displayed from which can be chosen the following types:

NONE	Periphery	Loop	Network
Action	Event		

After choosing the desired type it is introduced in the Type field of the screen - Fig. Screen 21.

The Output Types have the following meaning:
- **NONE** - The output is not used.
- **Periphery** - Select this option when the output is a terminal of a periphery device, as OUT module.
- **Loop** - Select this option when the output is an output terminal of a loop device, as MIO-22, MIO-04, MOUT, etc.
- **Network** - Select this option when the output will be activated from a network device (panel/repeater number).
- **Action** - Select this option when the output will be activated from an action event.
- **Event** - Select this option when the output will be activated from a general event.

3.6.8 Submenus for setting of Output Type parameters
Depending on the selected type of the output, after choosing the **MORE** button, could be programmed different type of parameters. The information is displayed on a separate screen. All introduced changes must be confirmed with "Apply" button.

3.6.8.1 PERIPHERY Type - Periphery Output Parameters
Select this option when the output is an output terminal of a periphery device. Choose the **MORE** button:

- *Periphery Device Address*. Review the address number of a periphery device. This field is not accessible for editing. Usually this is the OUT module mounted to the main PCB board of the IRIS control panel and its address is 2. To check the real address number of the OUT module go to DEVICES menus - PERIPHERY, and scroll with the arrow buttons to find it - se also Fig. Screen 6.

- *Periphery device output*. The button will be active if at the Periphery Device Address field is entered a correct number of OUT module. Enter a number of an output from 1 to 4.

3.6.8.2 LOOP Type - Loop Output Parameters
Select this option when the output is an output terminal of a loop device. Choose the **MORE** button:

- *Loop Device Address.* Enter an address number of a loop device.
- *Loop number*. Enter the loop number.
- *Channel*. Enter a number of an output accessible in the device. The available output numbers are displayed enclosed in brackets.

Note: *The modules with outputs SensoIRIS series - MIO-22, MIO-22M, MIO-04, MOUT, MOUT-240 - are displayed with the available outputs. If the device is a detector, call point or a conventional zone module, the panel will show only one channel for it and it is not programmable.*

The following messages on the screen is possible to alert the installer for problems:

- **"This device can not be used as Output!"** - *That means the device (loop or periphery), or the set channel, cannot be used for operation as output. The message will be displayed if the set address is of a device type SensoIRIS MIO-40, MINP M or channels 1 and 2 for MIO-22 and MIO-22 M modules.*

- **"Already used!"** - *That means the device, or the set channel, is already set for other operation into the system configuration.*

3.6.8.3 NETWORK Type - Network Output Parameters

Select this option when the output will be activated from a network device (panel/repeater number).
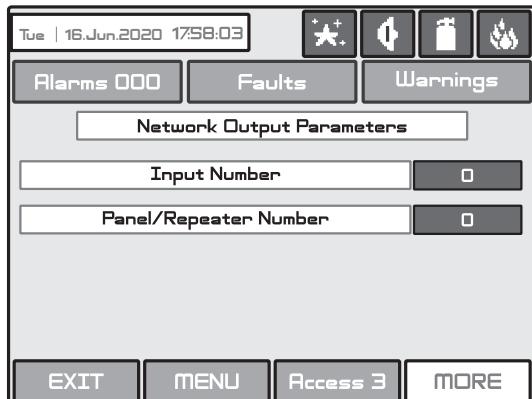
Choose the **MORE** button:
- *INPUT Number.* Enter a number from 1 to 250.
- *PANEL/ REPEATER Number.* Enter a number from 1 to 64.

3.6.8.4 ACTION Type

Select **Action Type** option when the output will be activated from an action event. The action event is set in a Function field accessible after pressing MORE button. The possible action events are:
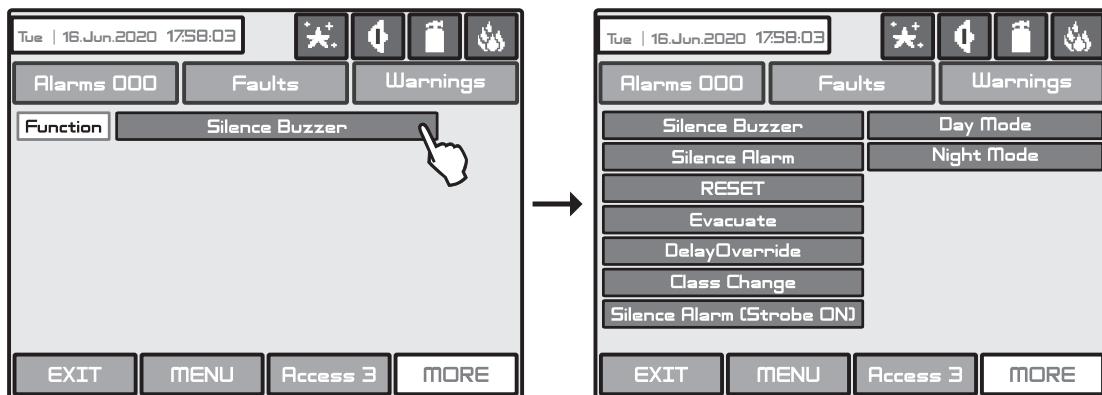
Fig. Screen 22 - Menu for action events introducing.

The actions have the following meaning:

    - SILENCE BUZZER - Action in case of silencing the buzzer in the system.
    - SILENCE ALARM - Action in case of silencing alarms in the system.
    - RESET - Action in case of reset in the system.
    - EVACUATE - Action in case of evacuation event in the system.
    - DELAY OVERRIDE - Action in case of delay override event in the system.
    - CLASS CHANGE - To use the class change function, connect the terminals of a switch with normally open contacts to the module terminals. The action is will be in case of activation of the switch. The sound tone for class change function is set in Sounders Mode menus, see item 3.7.4.
    - SILENCE ALARM (STROBE ON) - Action in case of disablement of the sounders during evacuation event, for example when using the panel together with a separate Voice Evacuation System. The sounders will be silent, but their LED signalization will be active (WSST, WSST IS, BSST and BSST IS) regardless their individual settings.
    - DAY MODE - Activation in case of switching to DAY Operation mode.
    - NIGHT MODE - Activation in case of switching to NIGHT Operation mode.

Press the EXIT button to escape to the main Outputs menu and change the settings with the "Apply" button.

3.6.8.5 EVENT Type

Select **Event Type** option when the output will be activated from an general event. The event is set in a Function field accessible after pressing MORE button. The possible events are:

Fig. Screen 23 - Menu for events introducing.

The events have the following meaning:
- ***ALARM*** - The output is activated in ALARM event, such as FIRE Alarm.
- ***FAULTS*** - The output is activated in FAULT event.
- ***WARNINGS*** - The output is activated in WARNING event.

Press the EXIT button to escape to the main Outputs menu and change the settings with the "Apply" button.

3.6.9 Menu for setting input groups, controlling outputs (Edit Outputs MAP)
This is a special menu for programming logic operations for activation of outputs. The map is individual and can be set for every output number. The logical interactions of how inputs will control the output are set on a map, as it is presented on a separate screen after pressing the Edit Outputs Map button from the Outputs main menu - see Fig. Screen 21.
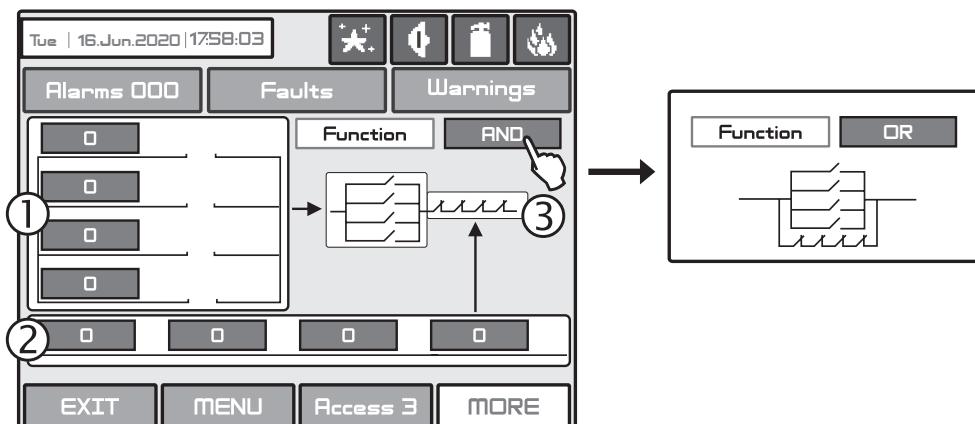
Fig. Screen 24 - Edit Outputs Map

The screen is organized into 3 areas:
1 - Section for setting of input group numbers operating into OR logic.
2 - Section for setting of input group numbers operating into AND logic.
3 - Setting the type of logic interaction between sections 1 and 2 - AND or OR logic function. The logic is set with the button on the right up corner. Every pressing of the button is changing the logic function. The chosen logic is displayed on the screen with a diagram representing the interaction between the input group numbers from the sections 1 and 2.

To set an input group number, press the button and enter the number via the keyboard. Note: It is important to know in advance the numbers of the used input group numbers for the operation of the programmed output. It is recommended to create a list describing the correspondence between input - output logical operation.

Example for settings of Edit Outputs Map
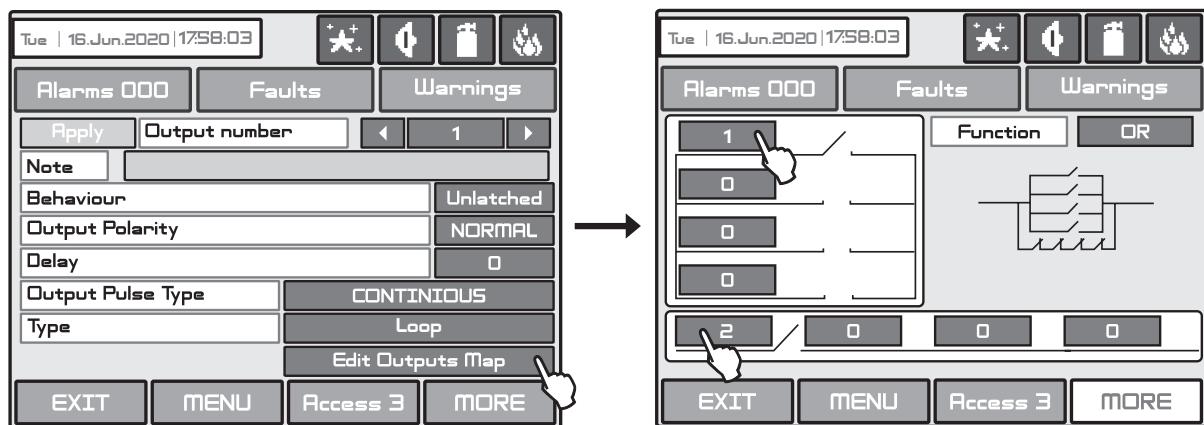
Select a free output number - in the example is number 1. Then select the Type of the output - in the example the type is a loop device with outputs - see the item 3.6.8.2 of how to set the Loop Type parameters. Press Edit Outputs Map button to enter the output map. Set input group numbers into the vertical (OR section) and into the horizontal (AND section). The set positions are displayed with "an open switch" representing a function operation. Select the logic for operation of the both section.

In the example, the output number 1 is activated when either of output group 1 or 2 is activated - they are operated on OR logic. If you set the operating logic to AND, then the output number 1 will be activated only in case the input group numbers 1 and 2 are activated together.

Confirm all the changes with "Apply" button at the main Outputs screen.

3.7 Panel

Choose in sequence from the Main menu screen **System - Programming - Panel.**
From the **Panel** Menu you can switch over seven additional submenus and to change the access codes and level, and to set parameters of the available network, sounders and call points modes, ect.

Fig. Screen 25 - The Panel Menu.

3.7.1 Changing the Code and Access Level

The system supports 4 separate access codes, as to every one of them can be given a different access level. See item 3.1 where are described the default setting of the codes and access levels. Every code has 4 digits.
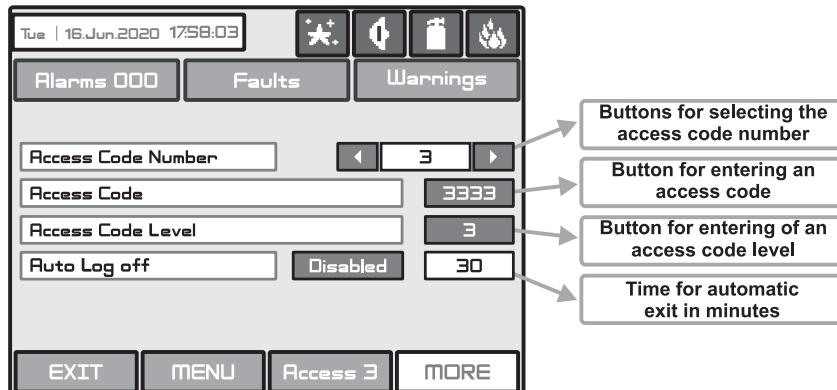
Fig. Screen 26 - Codes and Access Level Introducing.

The new code introducing is done in a separate screen (see also Fig. Screens 1). After the code is initially entered, the system shall request the code to be entered again for verification. If the codes differ, the system will ignore whatever was entered and the old code will remain active. If both codes are identical, the new code will be displayed in the "**ACCESS CODES**" output field and an "**Apply**" button will appear. Select "**Apply**" to save the new code. If a code has already been entered the system will ignore it and will retain the old one.

Changing the level of access is done by choosing the "**Access Code Leve**l" button next to the field for calling out the access level. When activated, a menu appears in which the user selects a new level of access (1-3) by pressing the respective button or "**EXIT**" to leave. If the newly assigned access level is different from the current one, the "**Apply**" button will be activated. Pressing that will save the new access level.

The "Auto Log off" field is active when the 3rd access level is set. When the field is enabled, the exit from the 2nd and 3rd access levels will be automatic. The time for automatic exit is set in range from 1 to 60 minutes if no other action is performed (pressed button for example). When the "Auto Log off" field is disabled the installer must exit the programming menus manually back to Access Level 1 to prevent unauthorized access and changes of the system parameters.

There must be at least one code in the system with an access code level 3! The program disallows editing a level of access (3) if it is the only one!

3.7.2 Network

After pressing the **Network** button a new screen will be displayed. The Installer / User can set there the parameters of two submenus: **Network Settings** and **Panels**.

3.7.2.1 Network Settings Menu

In this menu can be set parameters for the separate fields - see Fig. Screen 27.
• **Name** - Introduce the name of the panel - up to 40 digits.
• **Port** - TCP/IP port for communication with the panel is introduced. The panel automatically takes ports Port+1, Ports+2. They have to be free for using from the panels. All the panels in the network have to be with the one and the same port number. If a port change is needed and made the panel has to be reset by power supply.
• **Panel Number** - An unique panel number (1-64) in the network is introduced. By this number the panels can "recognize" each other.
• **EVAC Panel Number** - An unique panel number (1-5) in a network with PASO panels is introduced. The IRIS panel always takes the last number in such kind of specialized network. A connection of EVAC Voice module is required to "Network" terminal of the LCD module - see item 2.9. The programming of operation of the PASO panels is described in item 3.7.4 - Sounders Mode - EVAC Zones.
• **Network Status** - The network can be Enabled and Disabled.
• **Network Type** - The network type can be **LAN** (in case of LAN interface network connection is used), **RS485** (in case of Redundant Network module is connected to the panel - see item 2.6 and Figure 27), **Voice EVAC** (in case of connection to EVAC Voice Module is connected to the panel) and **Voice EVAC+LAN** (in case of connection of EVAC Voice Module to the panel and using LAN interface connection). **Attention: When several panels IRIS and/or SIMPO are connected in a network the setting in this field must be the same for all of them!**
• **TCP/IP Protocol** - Choose the communication protocol type according used BMS system software - Modbus RTU over TCP/IP or Modbus TCP/IP.

All changed parameters are confirmed and saved by pressing the APPLY button in the upper left corner of the screen - it will appear in the place of "Name" field.
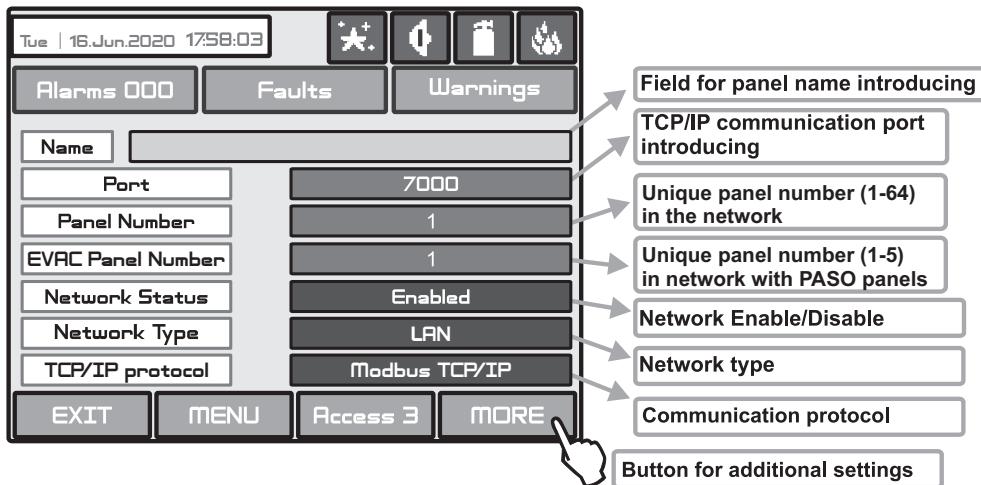
Fig. Screen 27 - General View of Network Settings Menu.

From **Network Settings** menu can be programmed additionally panel IP, Netmask and IP-number of the Router, as and to be seen the panel MAC-address after choosing the MORE button - see Fig. Screen 27A.

REDUNDANCY - Use the button to set an option for ignoring a fault message for broken connection in the redundant network. Set OFF if you do not want to monitor the status of the connection in the redundant network; set ON if you want to monitor the continuity of the redundant network.
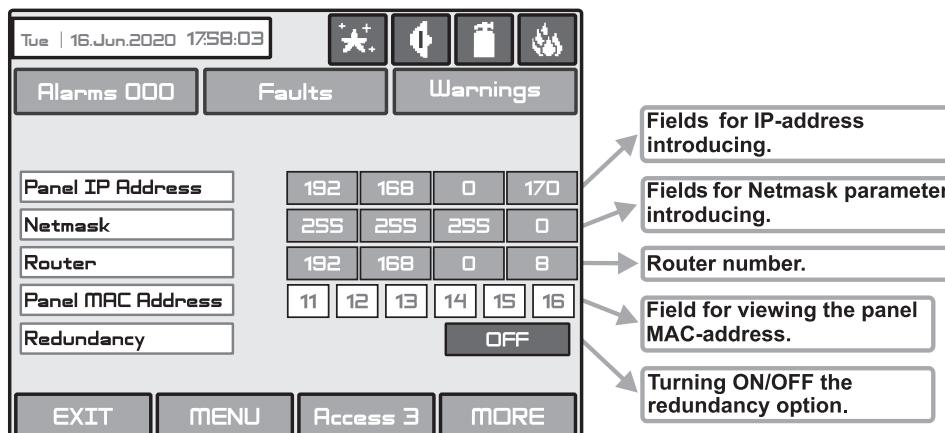
Fig. Screen 27A

3.7.2.2 Panels Menu

After Enabling the Network, every panel starts looking for other panels in the network. If a new panel is found in the system it is added to the panels list. The list can be viewed by using the pointers and the IP-numbers of the found panels are displayed. If the panel will be included in the Network it must be saved by ADD command on the screen. Then the status of the panel from N**ew Panel** will turn to **Present**. The panels can "look at" each other and if any of them is lost its status will change to **Fault.** From this menu can be chosen also what information would be received from the respective panel: messages and/or commands.
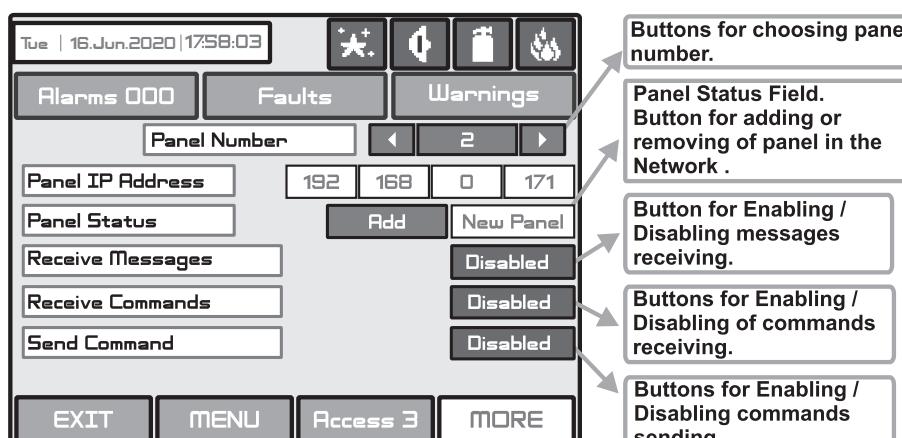
Fig. Screen 28 - General view of the Panels Menu.

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If the messages receiving option is Enabled, the Installer / User should describe also the input actions as choose the **MORE** button - Fig. Screen 28A. Every message can be enabled or disabled.
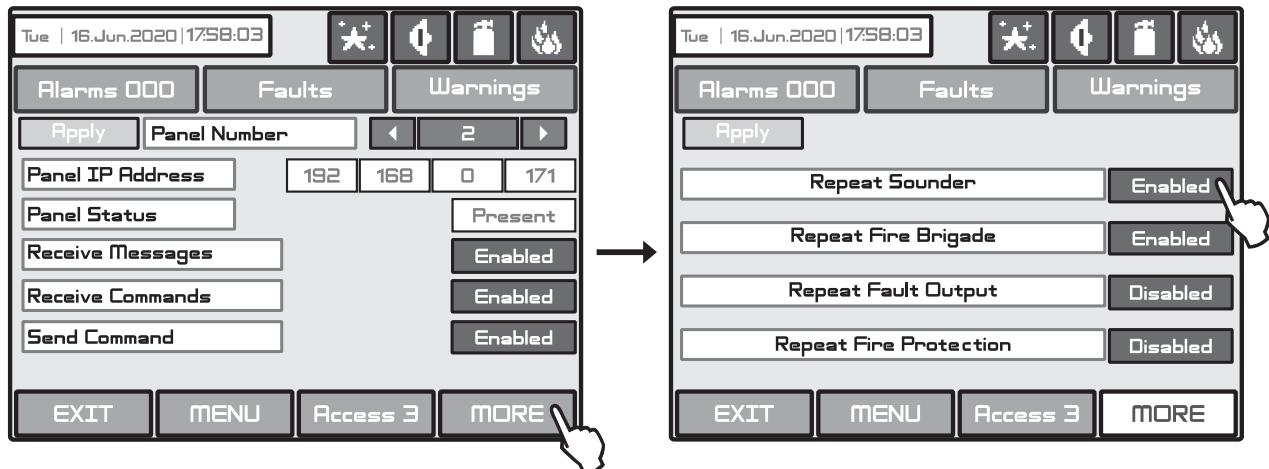
Fig. Screen 28A.

The messages have the following meanings:

• **Repeat Sounder** - Follows the **Sounder** output status of the remote panel including the delays.

• **Repeat Fire Brigade** - Follows the **Fire Brigade** output status of the remote panel including the delays.

• **Repeat Fault Output** - Follows the **Fault Output** output status of the remote panel including the delays.

• **Repeat Fire Protection** - Follows the **Fire Protection** output status of the remote panel including the delays.

All changed parameters are confirmed and saved by pressing the APPLY button in the upper left corner of the screen.

If a panel from the Network is lost the other panels will generate a message "**Panel Fault**" - Fig. Screen 28B. If there is doubling of IP and network numbers, the panels with doubled numbers generate a **Fault** message. You can access to the Fault messages by pressing the Button **Fault** from the **Panels** menu.
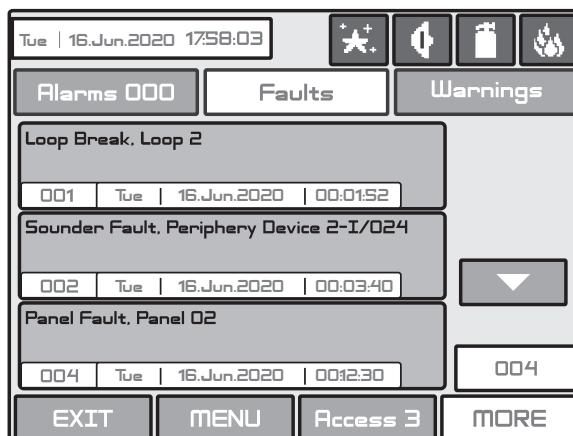
Fig. Screen 28B.

3.7.3 Disable Menu

Fig. Screen 29.

By pressing the button **Disable** from the **Panel** menu (see Fig. Screen 25), a screen for enabling/ disabling the earth fault, battery high resistance indication and internal buzzer signalization are displayed. Press the "Apply" button to introduce changes.

ATTENTION: The indication for "Battery High Resistance" must be enabled for conformity with EN54-4 standard!

NOTE: At the initial power-up of the panel the indication for "Battery High Resistance" is disabled and must be enabled from the installer.

IMPORTANT: Every time after full restart of the panel (main and back-up power supplies are turned off and switched on again) the indication for "Battery High Resistance" is disabled and must be enabled from the installer.

3.7.4 Sounders Mode

Choose button **Sounders Mode** from **Panel** menu to enter in this submenu - see Fig. Screen 25. The Installer has a possibility to set a group of parameters common for all sounders in the system.
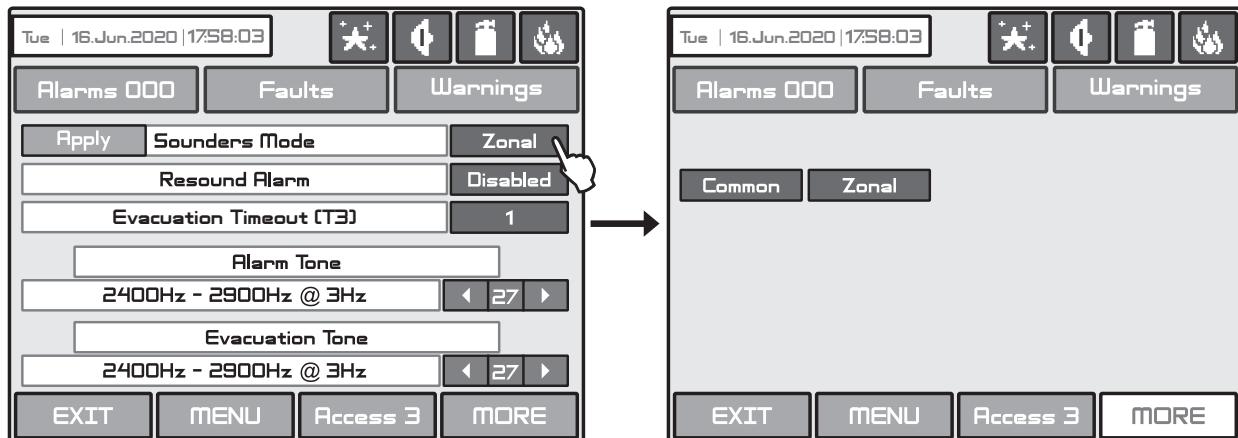
Fig. Screen 30 - Choosing a Sounders Mode.

The following parameters are available to set (Fig. Screen 30):
• **Sounders Mode** – Press to change the sounders operation mode. The options are displayed in a separate screen:
    • Common - All sounders will be activated with no sense of zone to which they are connected.
    • Zonal - Only the sounder of the zones with alarm condition will be activated.

• **Resound Alarm** – The field is active in both ZONAL and COMMON operation modes. When the option is Disabled, the silenced ones sounders will not be activated again in case of second Alarm event, and the sounders can be activated manual only. When the option is Enabled the silenced sounders will be activated automatically in case of new Alarm event.

• **Evacuation Timeout (T3) -** This a time delay for starting evacuation in the site. Set a time in minutes (from 1 to 10) for delaying the evacuation after receiving a fire alarm signal, i.e. this is a PreAlarm operation mode. In a fire situation only the sounder of the zone(s) with alarm condition will be activated. After the set evacuation timeout delay is over, the sounders in the whole site are activated also, according the evacuation settings performed (press MORE button in this screen to access the settings). If no time delay is required, set "0" for evacuation timeout (T3).

• **Alarm Tone** – Set the alarm type sound. Use the arrow buttons to select a number from 1 to 32 for the alarm sound - the reference parameters for the selected sound are listed in the description field. By default is set 27 alarm tone sound.

• **Evacuation Tone** – Set the evacuation type sound. Use the arrow buttons to select a number from 1 to 32 for the evacuation sound – the reference parameters for the selected sound are listed in the description field. By default is set 27 alarm tone sound.
Confirm the settings with 'Apply' button.

Press **MORE** button to enter a screen with parameters for "Evacuation Settings" (Fig. Screen 30A). The setting into this screen are obligatory when Voice Evacuation Panels (PASO) are connected to IRIS panel via Evac Voice interface module - see item 2.9. The setting are concerning the operation of the sounders on the site in case of fire alarm situation.
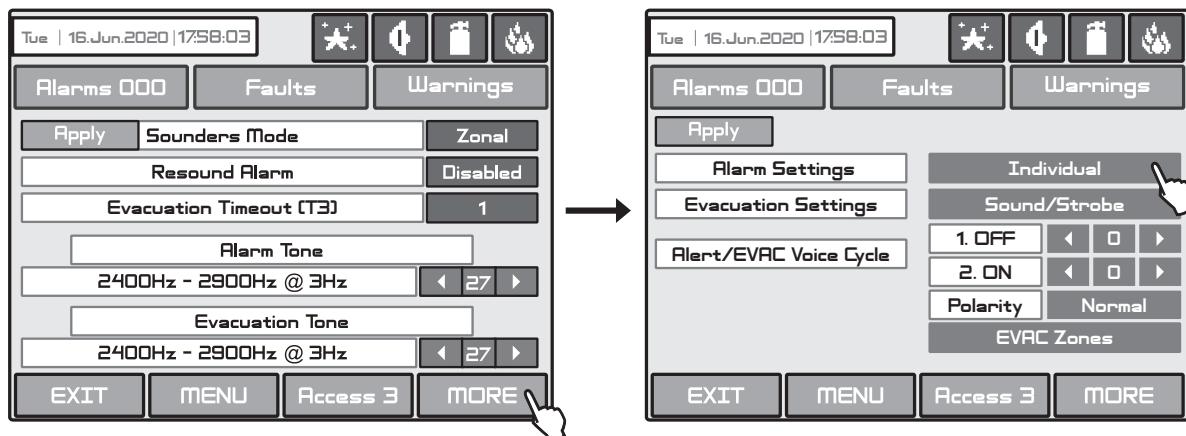
Fig. Screen 30A - Evacuation Cycle.

The following parameters are available to set (Fig. Screen 30A):

• **Alarm Settings** – Press to change the operation mode of all sounders in fire alarm situation. This setting is global and concerns all sounders in the fire alarm system. The options are displayed in a separate screen:
   • INDIVIDUAL - This option is set by default. Every sounder (WSST and BSST type) will operate with its currently set alarm Mode (individual settings in menu Devices - Loop), see the detailed descriptions in item 3.3.2.
   • STROBE LAMP - All sounders are activated with LED indication only, where it is applicable. The sounder outputs on the panel PCB are not activated.
   • SOUND - All sounders are activated with sound indication only. The sounder outputs on the panel PCB are activated also.
   • SOUND/STROBE - All sounders are activated with sound and LED indication. The sounder outputs on the panel PCB are activated also.

• **Evacuation Settings -** Press to change the operation mode of all sounders during evacuation of the site. This setting is global and concerns all sounders in the fire alarm system. The options are displayed in a separate screen, a there are 3 possible operation: STROBE LAMP, SOUND and SOUND/STROBE. The operation is same described above for the alarm settings.

• **Alert/EVAC Voice Cycle -** Use the arrow buttons to set a cycle sounding of the sounders in Alert/Evacuation mode in seconds. Alert cycle is acting in the same way as Evacuation cycle but during alarm. This means that the voice evacuation PASO panels can be triggered with alarm message also.
The function requires setting of two special times defining time intervals for sounders operation as follows:
   - ON – Set this time interval from 1 to 600 seconds. During Alert/Evacuation mode the sounders will operate with the Alarm/Evacuation setting described above – for example when SOUND/STROBE option is set the sounders will sounding and flashing at the same time (for the models available).
   - OFF - Set this time interval from 1 to 600 seconds. During Alert/Evacuation mode the sounders will operate only in FLASH mode (for the models available).
   - Polarity - Select NORMAL or INVERTED operation of the ON/OFF times. Choose which of them will start first in the evacuation cycle.

ATTENTION: The EVAC. VOICE CYCLE function is active only when the ON and OFF times are set different from 0. If one or both times are set to 0 the function is inactive.

For example: The operation mode is set to SOUND/STROBE and the EVACUATION CYCLE TIMES are set ON: 30 sec and OFF: 40 sec. When Evacuation is in process on the protected site the operation of the system according the EVACUATION SETTINGS will be the following: The sounders will sound (Evacuation tone) and flash for 30 seconds and then will only flash for 40 seconds. The cycle will repeat until resetting of the system or pressing the Silence Alarm button.

• **EVAC ZONE Button**
When to the IRIS panel is connected one or several (up to 5) Evacuation Voice Panels (PASO), their operation must be set in a separate menu accessible after pressing the EVAC Zones button - see Fig. Screen 30B. The hardware connection of PASO panels to IRIS is described in item 2.9.
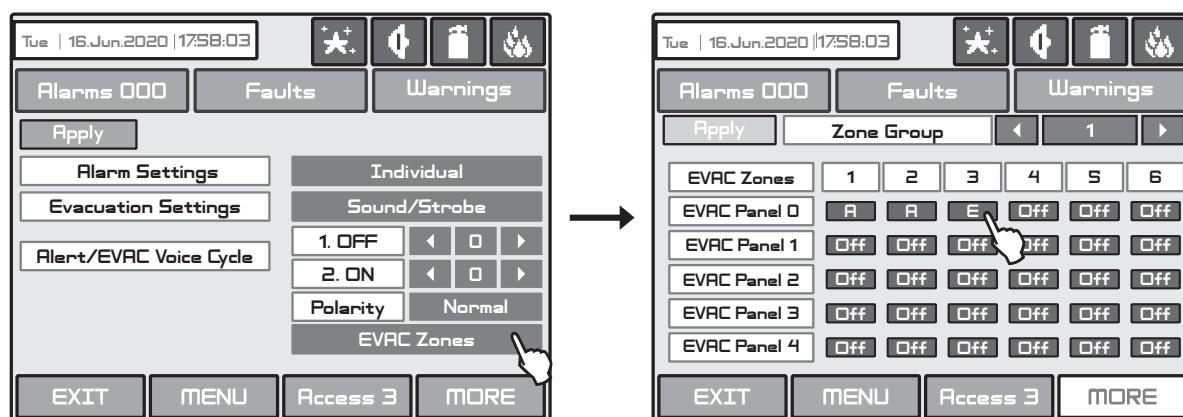
Fig. Screen 30B - Setting the operation of connected Evacuation Voice Panels (PASO).

The connected PASO panels are presented with numbers from 0 to 4 (max 5 connected to IRIS panel). The IRIS panel always takes the last number in a network with PASO panels. Its number has to be programmed additionally into the menus of the PASO panel.
The EVAC Panels operation can be set for up to 6 different Zones for Evacuation (EVAC Zones). Use the buttons under an EVAC Zone number to set operation of the PASO Panel for that zone.

Every pressing of the button changes the state:
- **OFF** - The operation of the PASO Panel for the respective EVAC Zone is disabled/switched off.
- **A** (ALERT/ALARM) - The PASO Panel will start emitting audible Alarm messages in case of fire alarm.
- **E** (EVACUATION) - The PASO Panel will start emitting audible Evacuation messages in case of fire alarm.

ATTENTION: For correct operation of PASO panels it is obligatory the ON/OFF times (Alert/EVAC Voive Cycle) to be set and different from "0". The current settings on the EVAC ZONES screen are for respectively set Zone Group. The EVAC Zone settings can be set different for the separate Zone Groups (1-48).

For example (Fig. Screen 30B): 1 PASO Panel is connected to IRIS panel. The settings for the PASO Panel must be introduced into "EVAC Panel 0" section. The settings are concerning all zone numbers associated to Zone Group 1. In case of fire alarm event in the system (IRIS panel), the connected PASO panel will start emitting Alert messages in EVAC Zones 1 and 2 (A option is set), a an Evacuation message in EVAC Zone 3 (E option is set). EVAC Zones 4-6 are not used (OFF option is set).

• **Setting "Class Change" Sound Tone**
In Evacuation Cycle screen menu, press MORE button to enter a menu for selection the tone sound for class change output (Action type) activation.
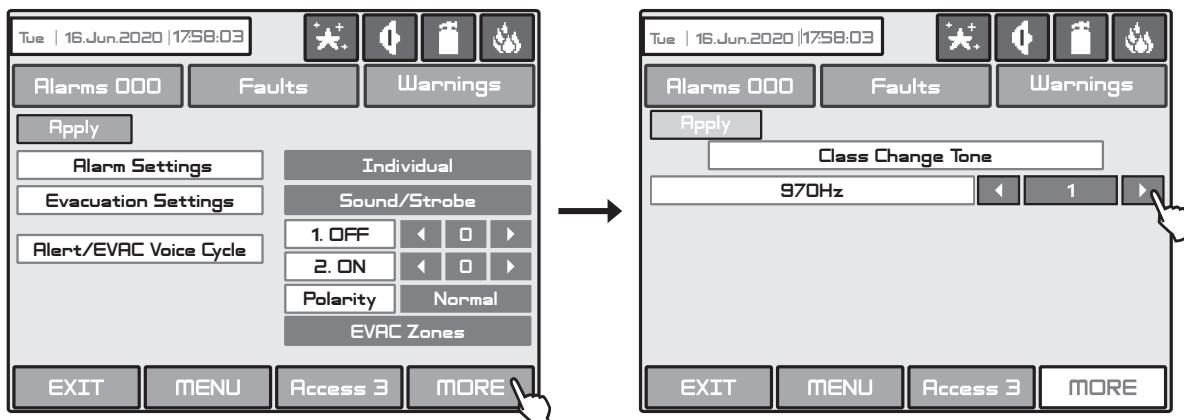
Fig. Screen 30C - Setting "Class Change" Sound Type.

For all panels in network with enabled repeating sounders function, the class change sounding shall also be repeated. Network panels will activate class change with the tone which is set in their own menu .

All changed parameters are confirmed and saved by pressing the APPLY button in the upper left corner of the screen.

3.7.5 Call point Mode

Choose button **Call points Mode** from **Panel** menu to enter in this submenu - see Fig. Screen 25. The Installer has a possibility to choose the alarm mode if a call point is been activated - Common or Zonal. For this purpose on a separate screen are displayed buttons, as:

• **Common** - A general alarm will be activated with no sense of to which zone the call point is been connected.
• **Zonal** - Only an alarm in the zone where the call point is been connected.
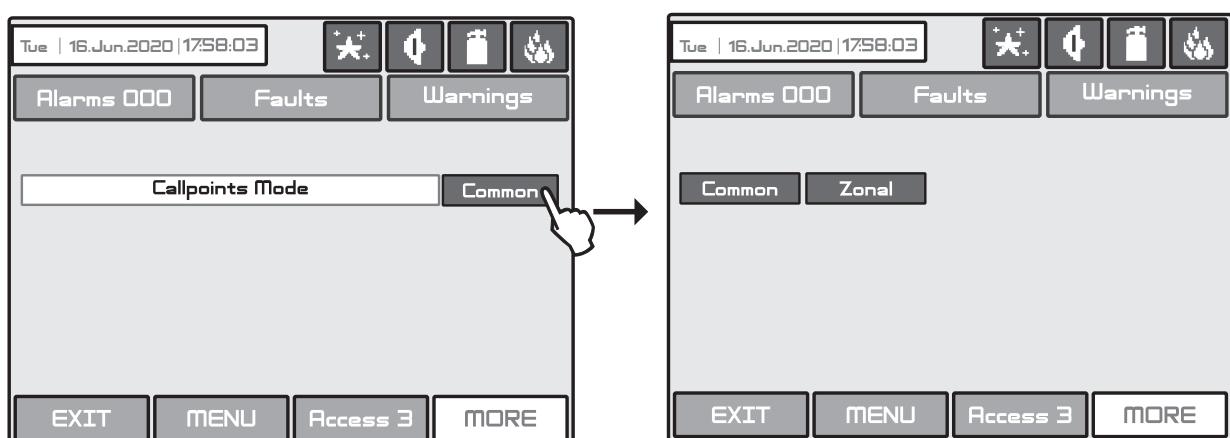
Fig. Screen 31 - Choosing a Call points Mode.

All changed parameters are confirmed and saved by pressing the APPLY button in the upper left corner of the screen.

3.7.6 Language selection

Here the Installer can choose between the available languages in the system. By default are set English menus. To change the language of the panel's menus just press the button with the corresponding translation - the menus are changing immediately and no further confirmation is needed.

3.7.7 Delay (T1)

Here the Installer can set a common time delay for activation for all outputs (from 0 to 60 seconds).
Note: If T2 delay time for a zone is set to 0, the T1 common delay time is ignored.
See also APPENDIX E - "Two steps of alarming" working algorithm.

3.7.8 Printer Menu

This is a menu for choosing the type of the device connected to "Printer" terminal on the main indication board - see Figure 19. To the "Printer" terminal can be connected a thermal printer or FAT/FBF control panel.

3.7.8.1 Thermal printer

The IRIS fire alarm control panel can operate with the following types of thermal printers:
- Cannon: Kafka and Datecs - see item 2.5.1. These are compact stand-alone model thermal printers.
- IRIS Printer - see item 2.5.2. The printer is situated in a durable metal box suitable for building of modular structure with IRIS M (model PRO).
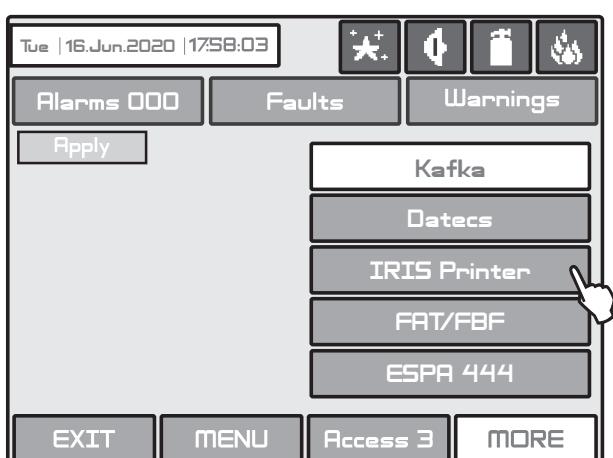
To select the printer type press the corresponding button and then confirm the change with the "Apply" button.
Only one type of printer can be selected.
No further programming for the thermal printer is needed.

Fig. Screen 32.

3.7.8.2 FAT/FBF Control panel menu

When a FAT/FBF control panel is connected to "Printer" terminal (see item 2.8.1), the settings of the operating inputs and outputs are made in the special menu FAT/FBF. From the Printer Menu press FAT/FBF button and confirm the change with "Apply".
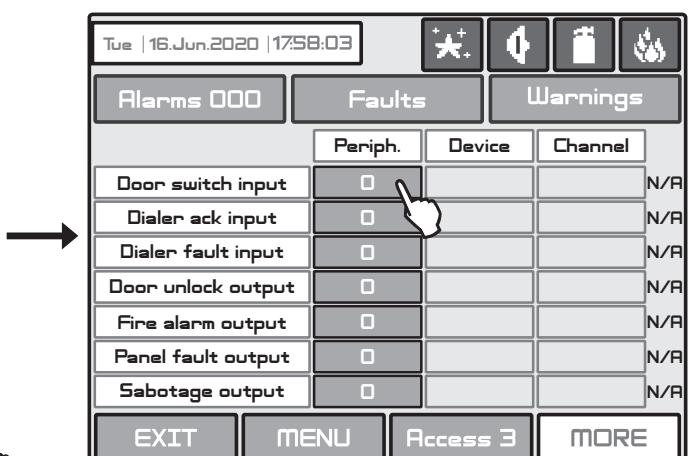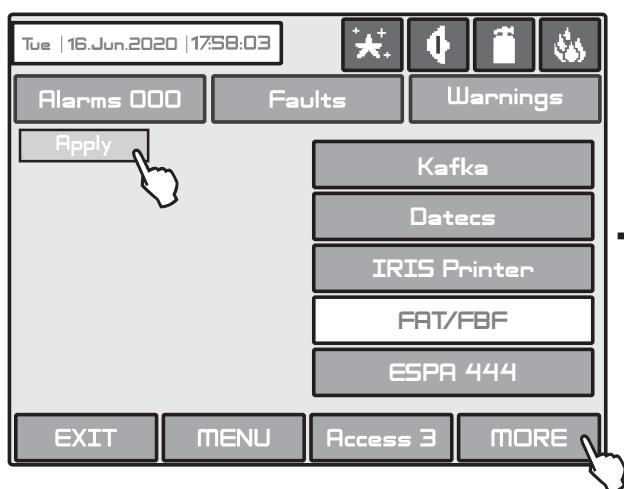
Fig. Screen 33 - FAT/FBF Control panel settings.

Press MORE button to enter into the special settings screen for programming the inputs and outputs - see also the block diagram at item 2.8.2. Every input and output is specified with:

• *Periphery device address.* The address is programmed in the "Periph." column. Here the installer enters the address of the periphery device (Loop expander, OUT module - see item 3.3.1.3) to which the device with input/output is physically connected. The actual address of the periphery device can be checked at menu System-Programming-

Devices-Periphery. The addresses of the periphery devices are programmed automatically with the first initial power-up of the system. The PSU always takes the first address, the OUT outputs relay module takes the second, and the following addresses are for connected loops: Loop 1 to address 3, Loop 2 to address 4, Loop 3 to address 5 and Loop 4 to address 6.

• *Device address.* In the "Device" column, the installer enters the address of the loop device with inputs/outputs. Note that, when the OUT outputs relay module is used the buttons in this column remain inactive. The actual address of the loop device can be checked at menu System-Programming-Devices-Loop.

• *Channel.* In this column the installer enters a number of a free channel, as the number depends on the type of the used loop device. For example, in SensoIRIS MIO-22 module, the inputs are displayed as Channel 1 - Input 1, Channel 2 - Input 2, and the outputs as Channel 3 - Output 1 and Channel 4 - Output 2. The actual correspondence of the input/outputs and channel number can be reviewed in menu System-Programming-Devices-Loop after setting the device address and entering into the device's menu.

Attention: The used inputs and outputs for management and control of FAT/FBF control panel cannot be used for other operation in the system. If a channel number, does not present or is used for another operation is set in this menu, the system will alert about that with message "N/A" (Not Applicable) at the end of the row. It is recommended to check in advance which inputs/outputs are free and available for FAT/FBF management.

The inputs and outputs (terminals of loop or periphery devices) are set for operation with their specific address and channel number. For realization can be used inputs of SensoIRIS MIO-22, MIO-22 M, MIO-40, MINP M modules, and for outputs can be used the programmable relay outputs of the panel, and outputs of SensoIRIS MIO-22, MIO-22 M, MIO-04, MOUT modules.

The programmable inputs and outputs in IRIS panel are listed at the left side of the menu and have the following meaning:

• *Door switch input (Input 1)* - This is an input for receiving a signal that the door of the key safe is opened. A warning message will be generated.

• *Dialer ack input (Input 2)* - This is an input for receiving a signal that the fire brigade confirms the Fire Alarm signal (the Fire Brigade team has received the signal sent from the IRIS panel through Output 2).

• *Dialer fault input (Input 3)* - This is an input for receiving a signal that there is a trouble with the operation of the dialer. The signal generates a Fault message visible on the panel's log with description of the device address and channel number. It is recommended to type individual name for that input so to be easy recognizable.

• *Door unlock output (Output 1)* - This is an output for sending a signal from IRIS panel for unlocking the adapter box of the key safe.

• *Fire alarm output (Output 2)* - This is an output for activation of the dialer and sending a Fire alarm signal to the Fire Brigade site.

• *Panel fault output (Output 3)* - This is an output for activation of the dialer and sending a Panel fault signal to a maintenance team or other unit for special support.

• *Sabotage output (Output 4)* - This is an output for activation of the dialer and sending a Sabotage alarm signal for unauthorized opening of the key safe adapter box to a maintenance team or other unit special support.

The changes must be confirmed with "Apply" button in the left up corner of the screen. The configuration is correct when all of the section are filled in and there is no messages "N/A" on the screen. That will ensure the correct operation between IRIS panel and FAT/FBF control panel.

Note: At first entering into the FAT/FBF programming menu the values set are "0" for all inputs and outputs. At the end of the rows are displayed messages "N/A". After setting an address of a periphery device ones it cannot be set back to "0".

Example of a FAT/FBF menu programming:

For the realization of the connection between IRIS panel and FAT/FBF panel are used **two MIO-22** modules and **three of the programmable outputs** of IRIS panel. The MIO-22 modules are connected and addressed to the **first loop** controller.

The following table represents the details of the programming:

	Periphery Device		Loop Device		Channel
	Type	*Address*	*Type*	*Address*	*Number*
Input 1	Loop	3	MIO-22	1	1
Input 2	Loop	3	MIO-22	1	2
Input 3	Loop	3	MIO-22	2	1
Output 1	OUT	2	-	-	1
Output 2	OUT	2	-	-	2
Output 3	OUT	2	-	-	3
Output 4	Loop	3	MIO-22	1	3

3.7.8.3 ESPA 444 Protocol

ESPA 444 is a serial protocol, originally created for interconnecting paging equipment with phone exchange systems and computers. This protocol is supported by a large number of systems, including fire alarms and nurse call systems. The connection between ESPA supporting equipment and IRIS panel is via RS232 serial port - Printer terminal - see Figure 19.

To select the protocol, press ESPA 444 button and confirm the change with the "Apply" button.

No further programming for the ESPA serial protocol is needed.

Note: During using ESPA serial protocol, no printers can be used for operation with IRIS panel.

3.7.9 Company Logo
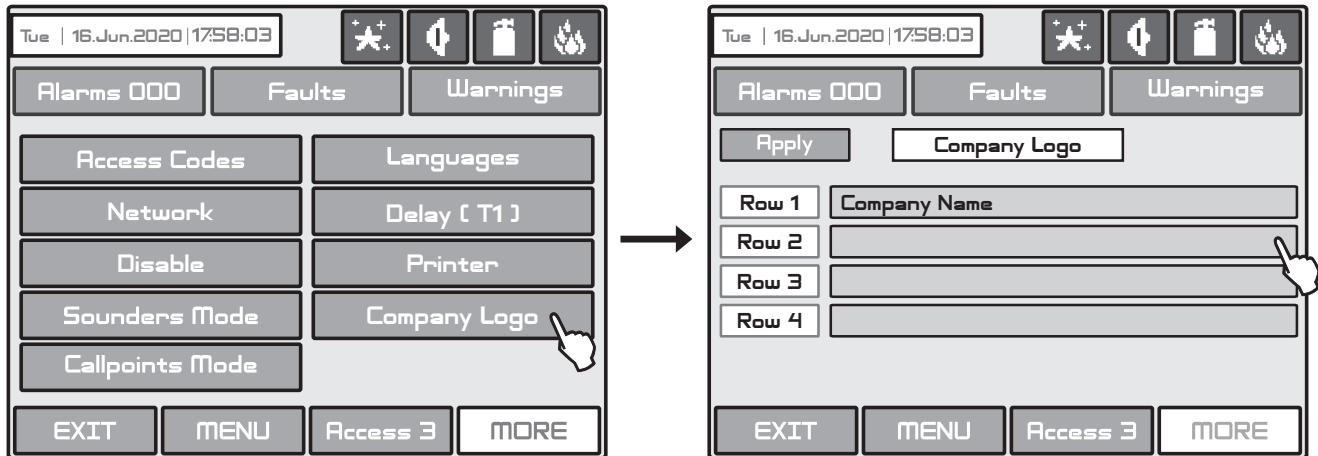
Fig. Screen 34 - Company Logo Menu

This is a menu for presenting some information for the company and maintenance service. The information is set on 4 rows as up to 40 symbols can be entered on every row. To enter text, press the active field next to the Row number. At the end press the Apply button to confirm the entered information.

The company information is displayed when at least one of the Rows is filled in and confirmed with Apply button. The information is presented aligned in the centre of the screen, as a screen saver, when more than 60 second there is not activity - no screen touch. The next pressing of the screen will activate the last displayed menu.

3.8 Restore Defaults

In this menu the installer performs reset to default settings of the system configuration. The panel will ask for confirmation of the action.

4. MAINTENANCE

4.1 Maintenance Menu

To enter in the Maintenance Menu the installer has to choose button "**Maintenance**" – Fig. Screen 1. The general view of the menu is shown on Fig. Screen 35.

Fig. Screen 35.

4.2 Time introducing
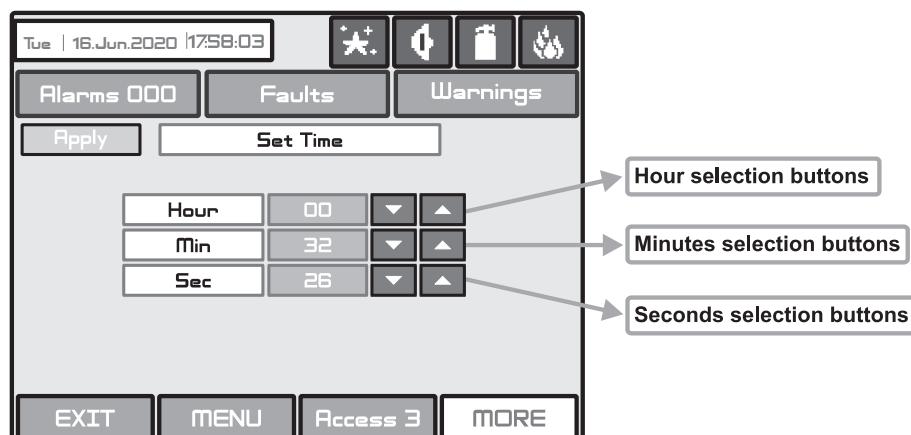
Choose the button "**Time**" from the Maintenance Menu to set the current time - Fig. Screen 36.

Use the **APPLY** button to confirm the settings.

The desired time can be set with the buttons for selecting the hours, minutes and seconds.

Fig. Screen 36.

4.3 Date introducing
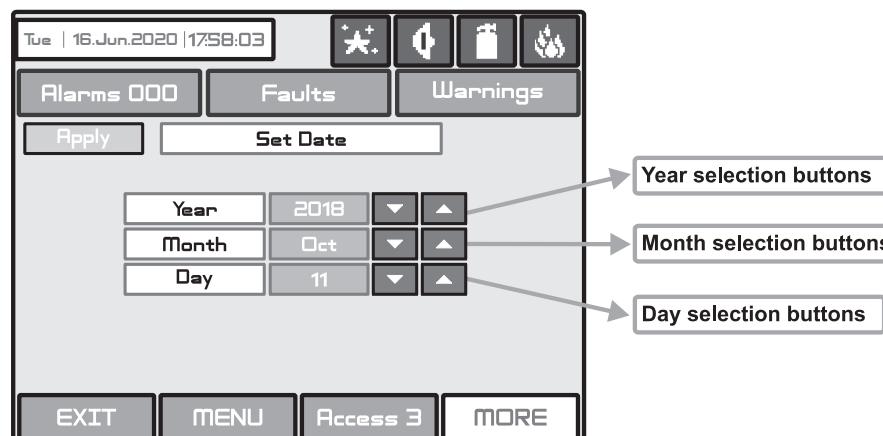
Choose the button "**Date**" from the Maintenance Menu to set the current date - Fig. Screen 37.

Use the **APPLY** button to confirm the settings.

The desired date can be set with the buttons for selecting the day, month and year.

Fig. Screen 37.

4.4 Daytime Mode

Choose the button "**Day Mode**" from the Maintenance Menu to set the daytime detectors operation. The Daytime operating mode can be enabled (ON), disabled (OFF) or to follow a time schedule (Schedule) Fig. Screens 38.
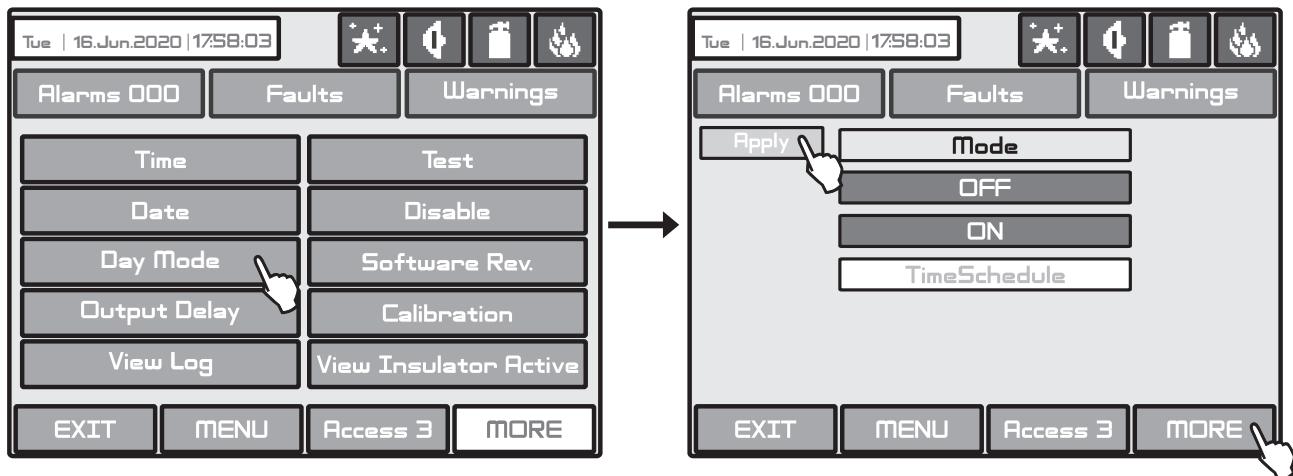
Fig. Screens 38

To program a Time Schedule press the "TimeSchedule" button and then "Apply" button on the left upper corner of the screen. Press the "MORE" button to enter the schedule list. In Day mode the detectors operate with alarm level which has been programmed as day mode. This is usually a level of lower sensitivity. It lowers the risk of false alarms caused by dust, cigarette smoke, etc. Night time mode is opposite to the daytime mode (higher level of sensitivity is applied).
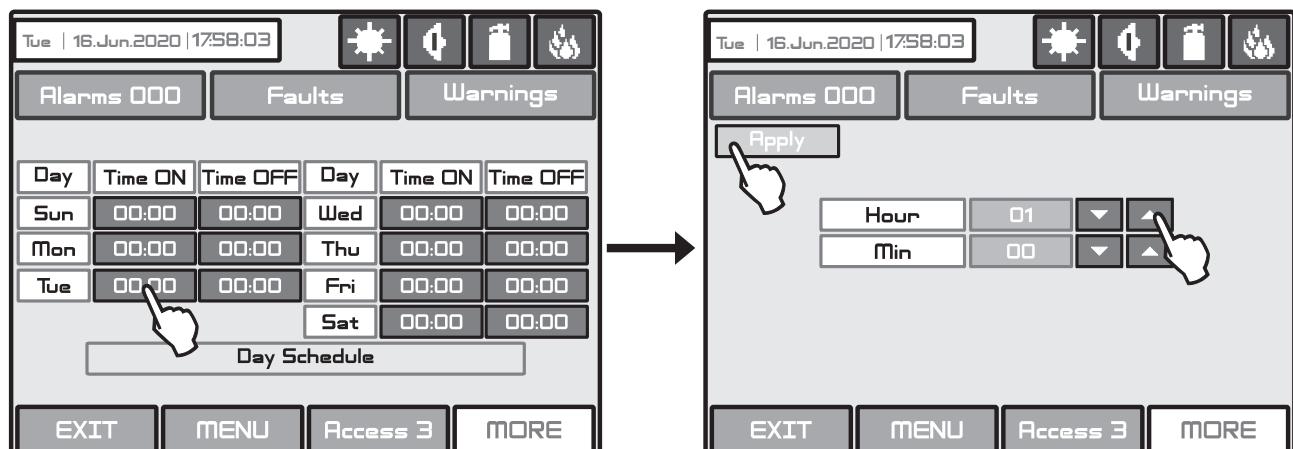
Fig. Screen 39

In Schedule mode the initial hour and minutes (the time when the daytime mode is activated) and the end hour and minutes (the time when the night time mode is activated) are introduced. The times are set for every day of the week. By default the station is in night time mode.

The Day time operating mode is indicated with icon [icon] in the system status field.

All changed parameters are confirmed and saved by pressing the APPLY button in the upper left corner of the screen.

4.5 Output Delay Introduction

Choose the button "**Output Delay**" from the Maintenance Menu to set the output delay – Fig. Screen 40.

The programming of submenus for "Sounder Delay", "Fire Br. Delay" and "Fire Pr. Delay" is accessible only for Access Level 3. The users with Access Level 2 can only switch on and off the set delay or time schedule. The users with Access Level 2 have no rights to change the set time schedules for the delays.
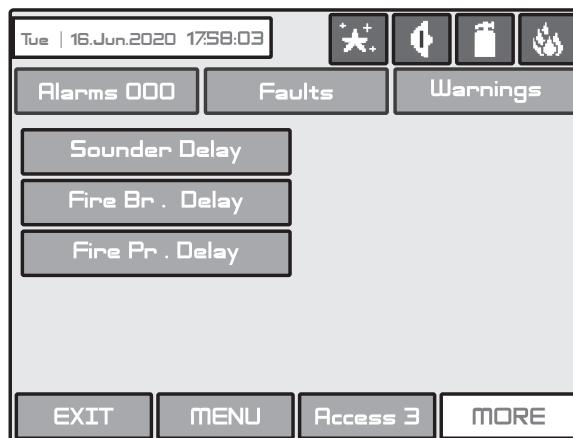
Fig. Screen 40

4.5.1 Sounder Delay

Choose "**Sounder Delay**" button from "Output Delay" Menu - Fig. Screen 40 to enter the submenu for sounder delay introduction - Fig. Screen 41.

A delay can be added before the sounders are turned on. This provides the possibility of checking the authenticity of the alarm before the sounders are turned on (an official visits the site and inspects for fire).
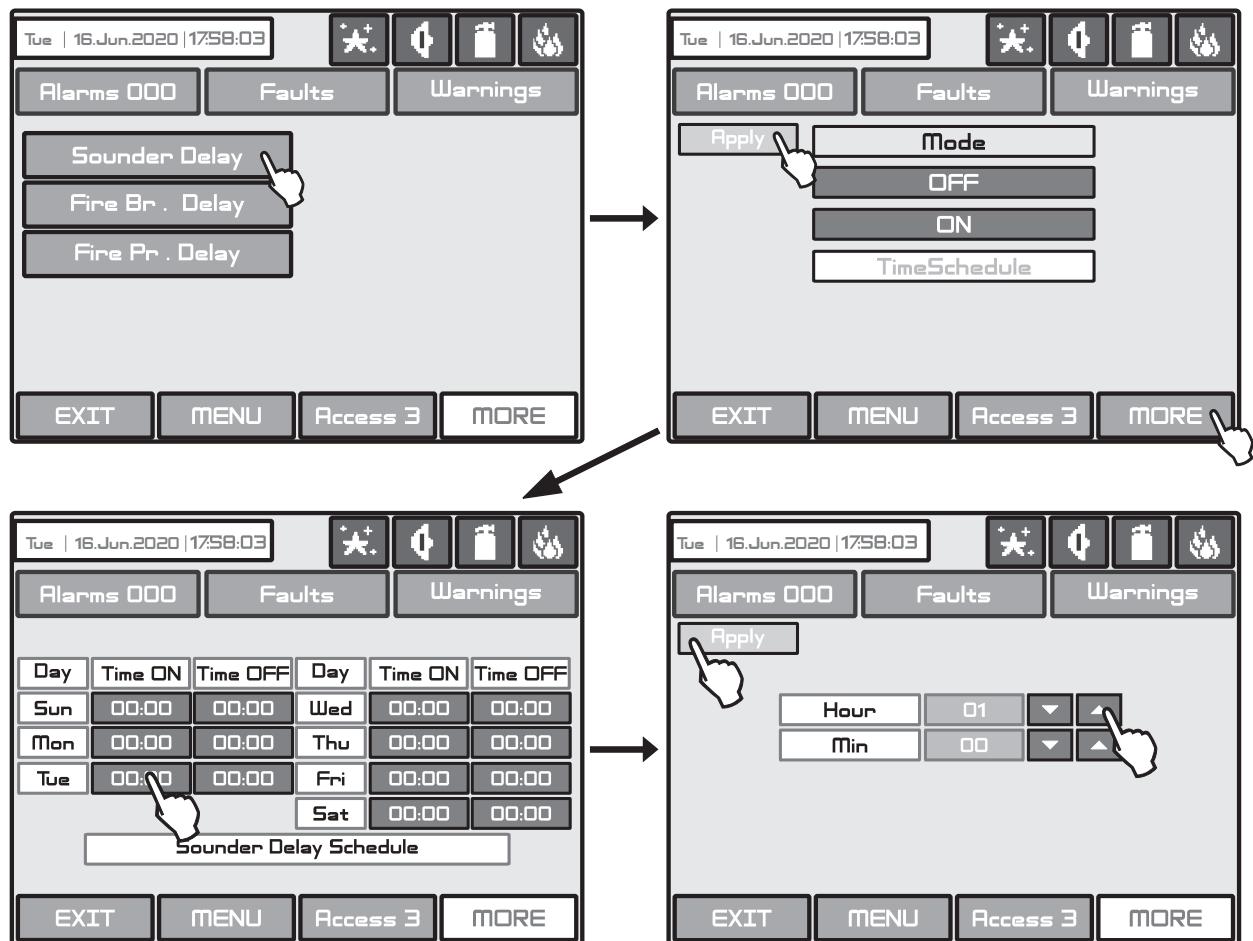
Fig. Screen 41 - Sounders Delay Introducing.

In Schedule mode the initial hour and minutes (the time when the delay is activated) and the end hour and minutes (the time when the delay is deactivated) are introduced. The times are set for every day of the week. During turned on "**Delay**" the LED is active.

4.5.2 Fire output Delay

Choose "**Fire Br. Delay**" button from "Output Delay" Menu - Fig. Screen 40 to enter the submenu for fire output delay introduction (the screen is the same as those for sounder delay introduction).

A delay can be added before the sounders are turned on (fire output). This provides the possibility of checking the authenticity of the alarm before the sounders are turned on (an official visits the site and inspects for fire).

The delay mode can be set to: **ON**, **OFF** or **Schedule**. In Schedule mode the initial hour and minutes (the time when the delay is activated) and the end hour and minutes (the time when the delay is deactivated) are introduced. The times are set for every day of the week. During turned on "**Delay**" the LED is active.

4.5.3 Fire Protection Delay

Choose "**Fire Pr. Delay**" button from "Output Delay" Menu - Fig. Screen 40 to enter the submenu for fire protection delay introduction (the screen is the same as those for sounder delay introduction).

A delay can be added before the fire protection system is turned on. This provides the possibility of checking the authenticity of the alarm before the sounders are turned on (an official visits the site and inspects for fire).

The delay mode can be to: **ON**, **OFF** or **Schedule**. In Schedule mode the initial hour and minutes (the time when the delay is activated) and the end hour and minutes (the time when the delay is deactivated) are introduced. The times are set for every day of the week. During turned on "**Delay**" the LED is active.

All changed parameters are confirmed and saved by pressing the APPLY button in the upper left corner of the screen.

4.6 LOG-file review and clearing

Choose "**View Log**" from the **Maintenance** Menu to enter in a screen for viewing the recorded events in the system. The addressable fire panel IRIS can show maximum 10 240 events, which could be viewed by date or number - Fig. Screen 42.

Fig. Screen 42.

The installer can clear the log-file history list with pressing the MORE button and then confirming with Yes button:
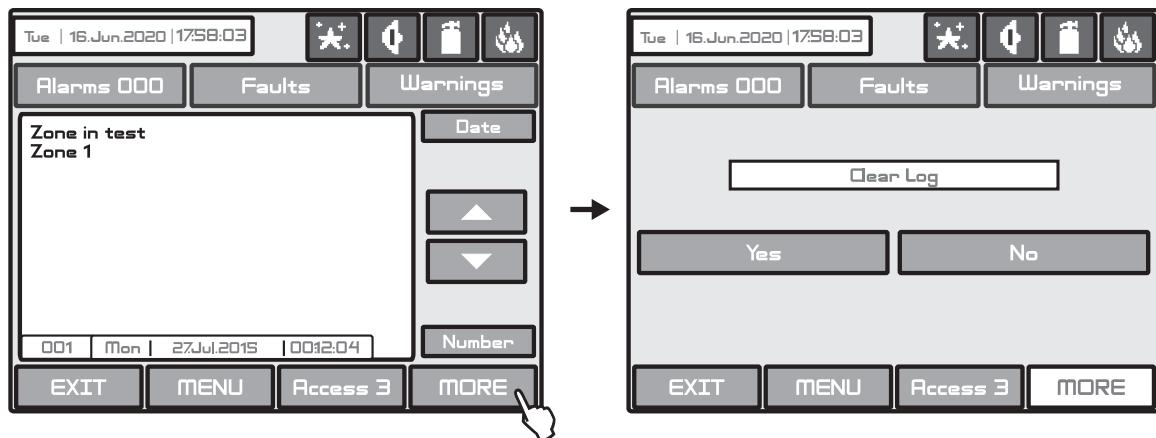
Fig. Screen 42A.

4.7 Testing

The addressable fire panel IRIS has an option for testing of the operability of the system. Entering the TEST menu the installer can maintain:

- Zone Testing
- Indication Testing (internal buzzer and LEDs operation)
- Device Testing - service menu
- Sounder Output Testing

To make a test, choose the "**Test**" button from Programming Menu - Fig. Screen 35. On the displayed screen the user/installer could choose which test to perform - Fig. Screen 43.

Fig. Screen 43.

4.7.1 Zone Test Menu

To perform zone testing, choose in sequence SYSTEM-MAINTENANCE-TEST-ZONE TEST. The screen displays a map of zone numbers from 1 to 50. To review the other zone numbers up to 96 use the down arrow. To go back use the up arrow respectively.
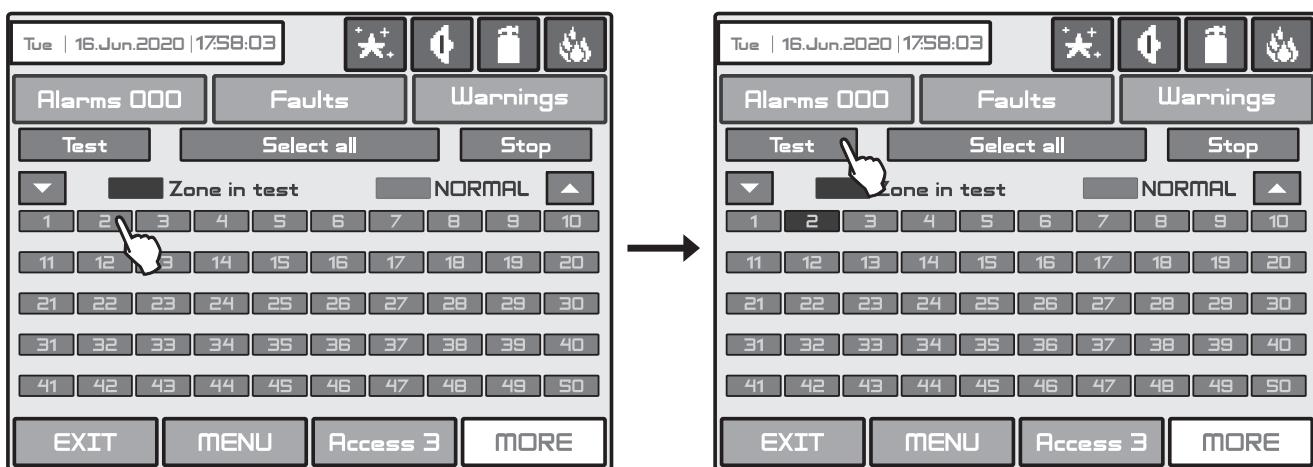
Fig. Screen 44.

To perform zone test, select a zone number from the map and press "Test" button. The LED TEST on the control panel is lighting on permanently. During the zone test mode the installer activates detectors in the zone (applies heat or smoke) to check their proper operation. The successful test is confirmed with a text message on the screen "Test Fire".
To stop the zone test press the "Stop" button - the LED TEST is off and the zone number is deselected. After stopping the zone test the respective zone number will be automatically reset, and all attached to it loop devices will be reset too. You can also select all zones by pressing the "Select all" button.

NOTE: *During the fire test of a zone the programmed logical inputs are not activated. If to a tested zone are attached input modules, they will not transmit logical signals in case of triggering.*

4.7.2 Indication Test
The indication test allows the installer to review the correct operation of the LED indication on the front panel and the sound signal of the internal buzzer. To perform the indication test, press "Indication test" button - all LEDs must light on and the internal buzzer starts sounding. The panel will automatically exit the general test mode after 6 seconds.

4.7.3 Device Test Menu
This is a service menu.

4.7.4 Sounder Output Test Menu
Here the installer can perform operability test of the sounder outputs on the control panel's PCB. To start the test press the "ON" button. The sounder outputs will be activated together with the LED TEST on the control panel. To stop the test press the "OFF" button.

4.8 Disable introducing
The user/installer can enable or disable the loop devices, zones and the outputs of the fire panel. To introduce enabling or disabling a function you can directly choose the respective button and make corrections, or first by pressing "**View**" button to look at the current status of the system and after that, if it is necessary, to enter new data – Fig. Screen 45.
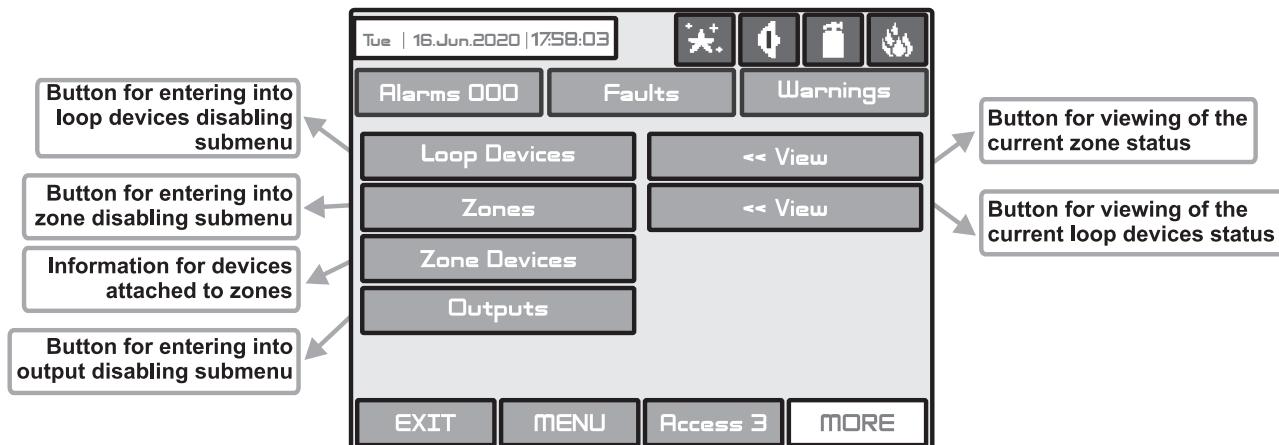
Fig. Screen 45.

4.8.1 Loop Devices Disabling
The user/installer could first look at the current status of the loop devices by choosing "**View**" button situated next to the "**Loop devices**" button - see Fig. Screen 45. The current status of the loop devices programmed earlier in the system are displayed on the screen (see part Programming, item 3.3.2 Loop Devices) - Fig. Screen 46.

In case of a disabled device, the panel generates a message "**Loop Device Disabled**" and the "**DISABLE**" LED is activated. The disabled devices do not generate messages to the panel. In case of disabled devices associated to a zone number, where it has passed into Normal mode, and of all devices without 1 if the zone is in "**2Devices**" mode, the same is automatically is disabled and a message "**Zone Disabled**" is generated.
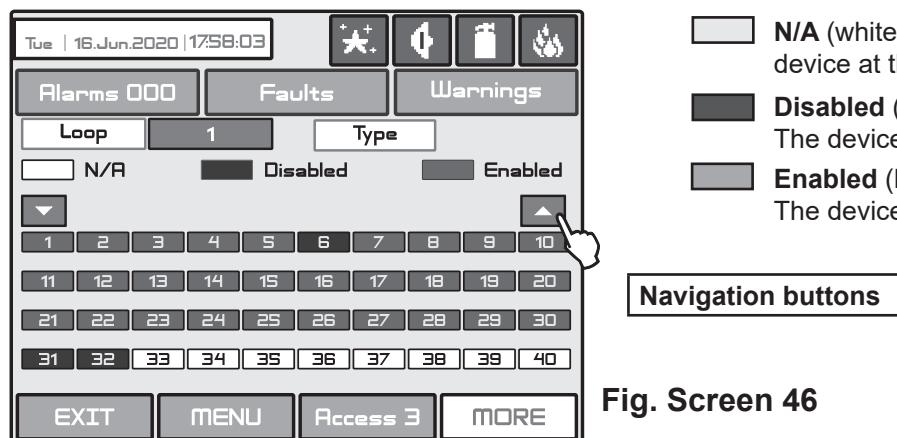
Fig. Screen 46

From the screen for the current status of the loop devices the user/installer can introduce new settings as choose the button with the number of the respective device 1, 2, 3…250. With the buttons ▼ ▲ is possible to be viewed the all loop devices in the system configuration. By choosing a button with a device number the user/installer moves to menu for setting of the parameters of the respective device see Fig. Screen 8, part **Programming**.

4.8.2 Zone Disabling

The user/installer could first look at the current status of the zones by choosing "**View**" button situated next to the "Zones" button - see Fig. Screen 45. The current status of the zones in the system are displayed on the screen (see part Programming, item 3.4 Zones) - Fig. Screen 47. In the case of a disabled zone, the panel generates a message "**Zone Disabled**" and the "**Disable**" LED on the control panel is activated.
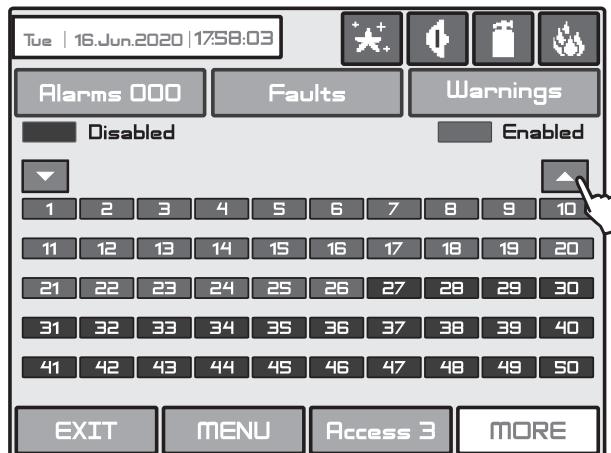
Fig. Screen 47

From the screen for the current status of the zones the user/installer can introduce new settings as choose the button with the number of zone 1, 2, 3…96. With the buttons ▼▲ is possible to be viewed all zones in the configuration of the system. By choosing a button with a zone number the user/installer moves to menu for setting of the parameters of the respective zone - see Fig. Screen 14, part **Programming**.

Note: From the disabling menu you can directly enter in the loop devices configuration menu (Fig. Screen 8) / zone configuration menu (Fig. Screen 14) as choose "Loop Devices" / "Zones" button (Fig. Screen 45).

4.8.3 Zone Devices Reviewing

From the menu for disabling introduction - Fig. Screen 45, the user/installer can also review the addresses of all devices attached to any zone in the system. Press the "Zone Devices" button. At the screen is presented information for loop and zone number with a list of available devices.

To select a loop number press the button near the "Loop" field. Every pressing of the button scrolls one number forward. The system starts from reviewing of devices addressed to Loop 1.

To select a zone number press the button near the "Zone" field. Use the virtual keyboard to enter the zone number and press OK button.
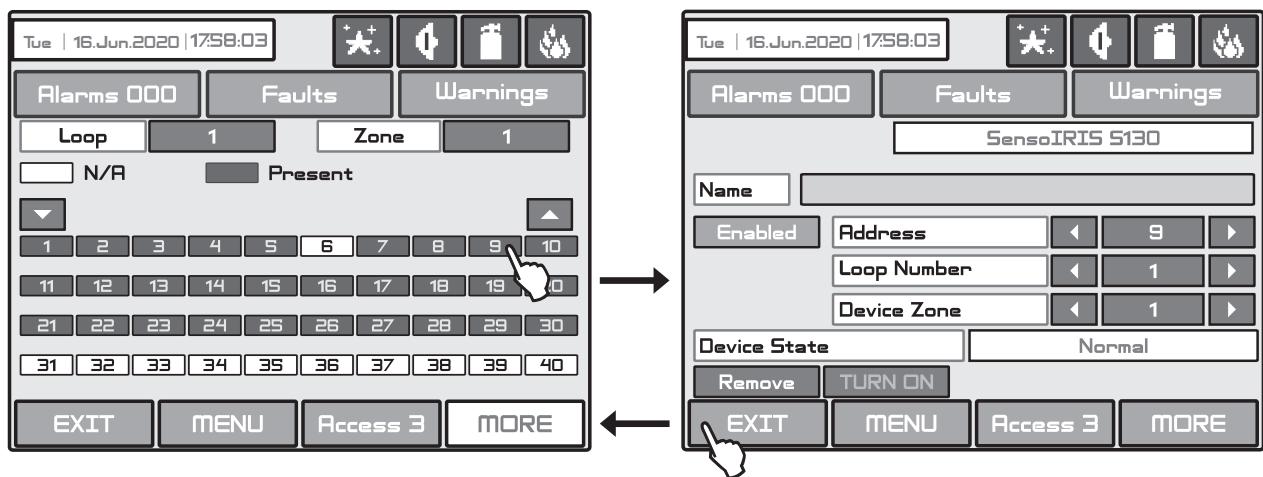
Fig. Screen 48

The addresses of the devices connected to the selected loop and zone are marked into grey. Use the buttons ▼▲ to review the rest of the devices for the zone. The type of the device can be reviewed after pressing the respective active number - see Fig. Screen 8, Part Programming. To return to the "Zone Devices" menu press EXIT button.

4.8.4 Outputs Disabling

From the menu for disabling introduction - Fig. Screen 45, the user/installer can disable or enable the monitored outputs of the IRIS fire panel - **Sounder**, **Fire Brigade**, **Fire Protection** and **Fault Output** - Fig. Screen 49, and the relay outputs on the 4-relay module. Use the **APPLY** button to confirm your choice.

In case of a disabled output, the panel generates a message for disabled output and the "**DISABLE**" LED is activated. The output will not be activated by the activating event.
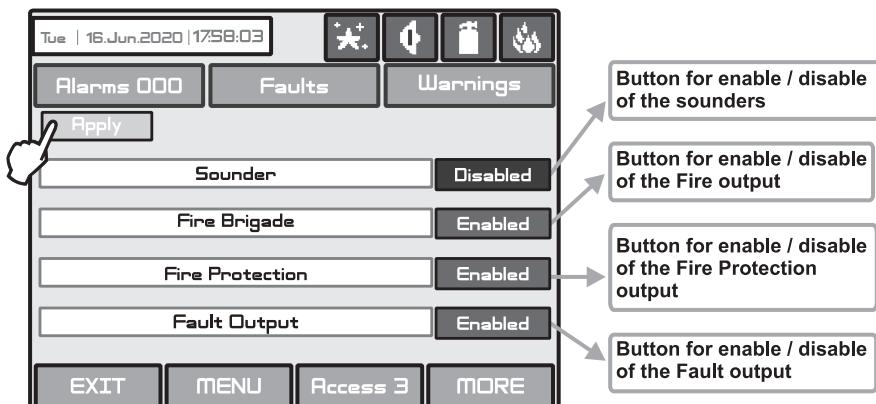
Fig. Screen 49

To disable/enable the relay outputs on the 4-relay module, press MORE button.
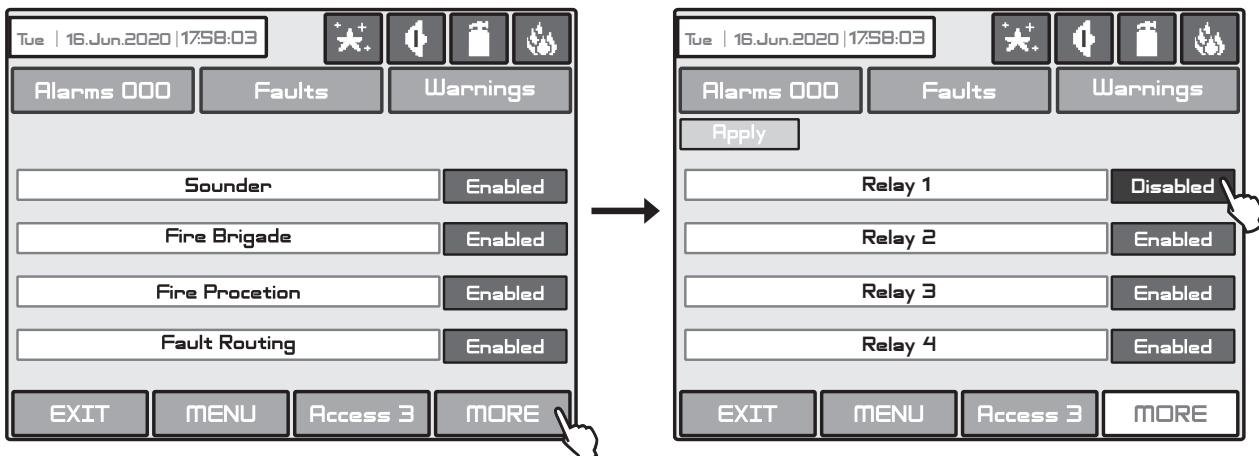
Fig. Screen 49A

4.9 Software version and Firmware Update

By choosing "**Software Rev**" button from the general **Maintenance Menu**, in a separate screen you can see the last version of the used software of the main CPU and the firmware revision of the panel.

This a menu also for firmware update of the panel. It is recommended first to save your system configuration with ProsTE software as *.*TDF file to your local computer.

To perform a firmware update of your IRIS panel, first download the last published firmware version (*.*BIN file) from the manufacturer's official web site: http://www.teletek-electronics.com or ask your local distributor of the equipment.

To perform the firmware update do as follows:

    1. Save the file (with *.bin extension) for the last actual firmware version to your local computer.

    2. Save your system configuration using ProsTE software.

    3. Enter the "Software Rev" submenu from the Maintenance menu. The screen displays the current software revision of the panel.

    4. Connect the panel to the computer using USB cable: Normal A to Micro B type.

    5. Wait for the message from Windows Explorer for found new Removable Disk.

    6. Use the Windows Explorer file manager to copy the new image update file (with *.bin extension) in Removable Disk directory.

    7. When the copying of the image file completes, remove the Removable Disk, as select Eject option from its dialogue box (right click with the mouse over it).

    8. If the data in the image file are correct, the panel starts the firmware update procedure of the main microprocessor accompanied with short beeps.

    9. Disconnect the USB cable.

    10. The panel will reset itself automatically after a successful firmware update.

4.10 Display

The Installer/User can check and calibrate some parameters of the LCD display. From the general **Maintenance Menu** you can enter the Display submenu.

4.10.1 Display Calibration

It is possible that after a certain period of use the parameters of the Touch screen display may change, causing difficulties in marking the sites. This would require it to be calibrated periodically, which can be done in access levels 2 and 3.

ATTENTION! Calibrating the display must be done with a Touch screen pen (or PALM)!

To begin a display calibration procedure the following sequence of actions must be performed:

Main menu → Maintenance → Display → Coordinates

The calibration of the display runs in the following 4 stages – see also Fig. Screen 50.

1. The message "**Press the cross center in the top left corner of the screen:**" is displayed on the screen.

The user has to press the point on the top left corner of the display. It is marked with a cross and it is desirable to choose the crossing point of the two lines. The calibration procedure shall continue after the point is pressed.

2. The "**Press the cross center in the top right corner of the screen:**" message is displayed on the screen.

By analogy, the next point, which has to be pressed, is selected – in the top right corner of the display, once again marked with a cross. The calibration procedure shall continue after the point is pressed.

3. The message "**Press the cross center in the bottom right corner of the screen:**" is displayed on the screen.

This is the last point and is situated in the lower right corner of the display. The calibration procedure shall continue after the point is pressed.

4. The message "**Press a point within the rectangle in the top left corner of the screen:**" is displayed on the screen.

This is the menu for verifying input data, and it is entered automatically. The user has to press the rectangular field with the pen in the upper left corner of the display.

The message "**Calibration Successful!!!**" will be displayed if the calibration has been successful and after pressing of any part of the display, the program returns to the main menu.

The message "**Calibration Unsuccessful!!!**" will be displayed if the calibration has been unsuccessful, the newly introduced data will be ignored and after pressing of any part of the display, the program returns to the main menu.
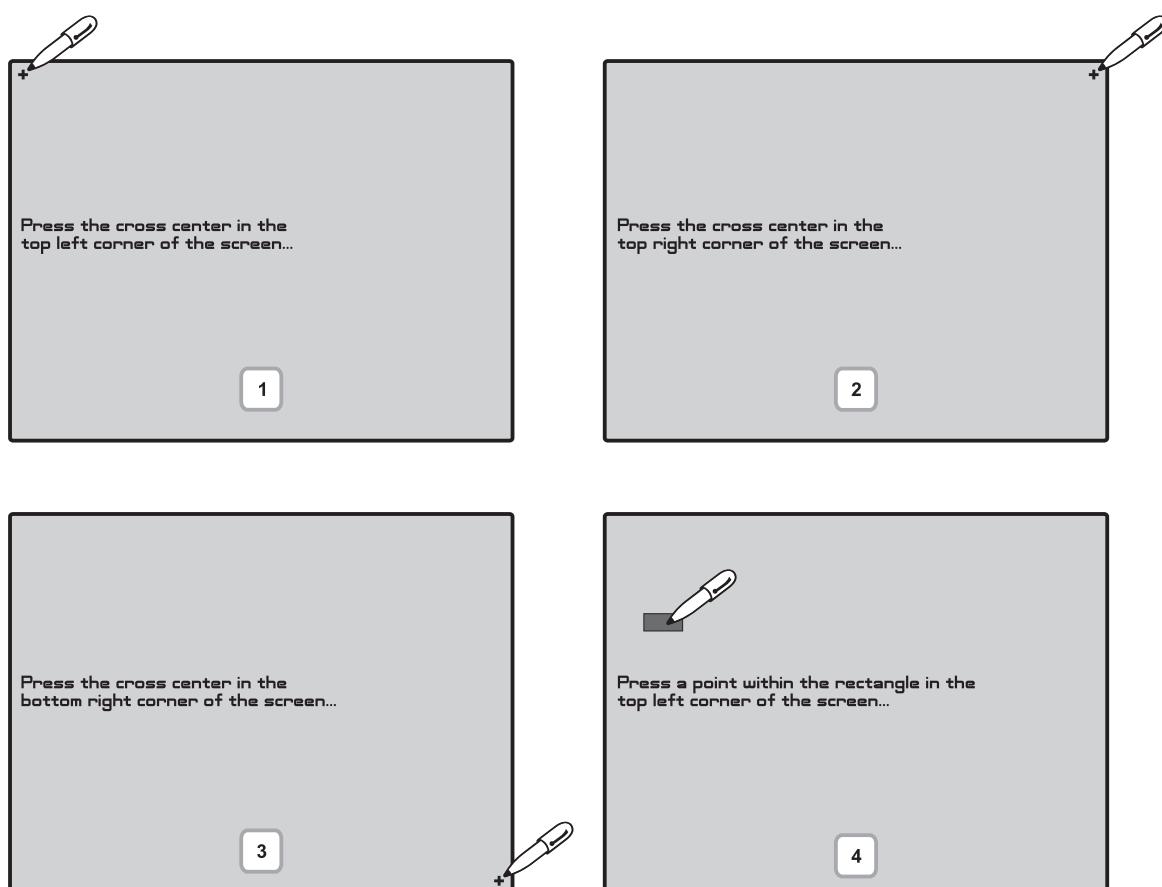
Fig. Screen 50.

4.10.2 Brightness Calibration

The Installer/User can also adjust the brightness of the LCD touch screen display. To see the brightness of the display choose the **Colours** submenu from the **Display Menu**.

To adjust the LCD brightness use a small plain screw-driver and turn the potentiometer on the left or on the right.

4.10.3 LCD Power Down Mode

The Installer/User can enter submenu for enabling/disabling "LCD Power Down Mode" as choose the **Power Save Backlight** button from the **Display Menu**. Every pressing of the button switches over the state of "LCD Power Down Mode". When "LCD Power Down Mode" is Enabled the LCD Backlight will switch off after 60 sec when the LCD touch screen display is not used.

ATTENTION: "LCD Power Down Mode" must be disabled for conformity with EN54-2 standard!
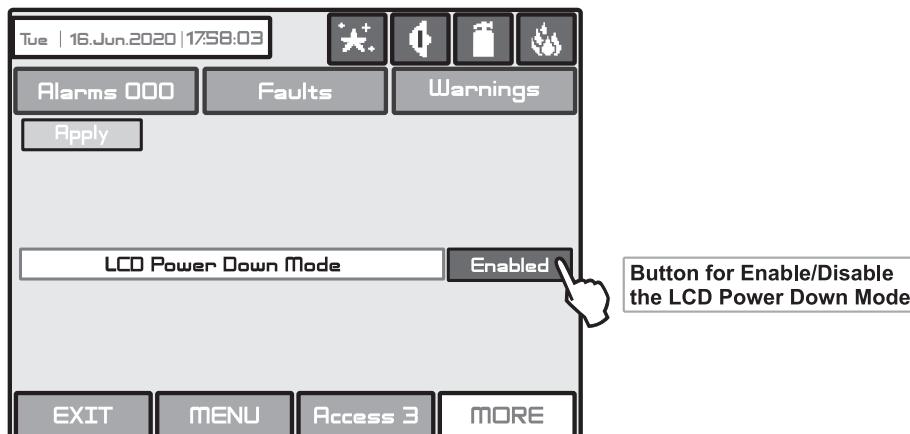
Fig. Screen 51.

Use the **APPLY** button to confirm you choice.

4.11 View Insulator Active

This is an information menu for reviewing the active insulators (built-in isolator in SensoIRIS devices). To access this menu choose in sequence SYSTEM-MAINTENANCE-VIEW INSULATOR ACTIVE - Fig. Screen 52. The active insulator in the system are displayed as device addresses in the field "Address" for TTE loops.
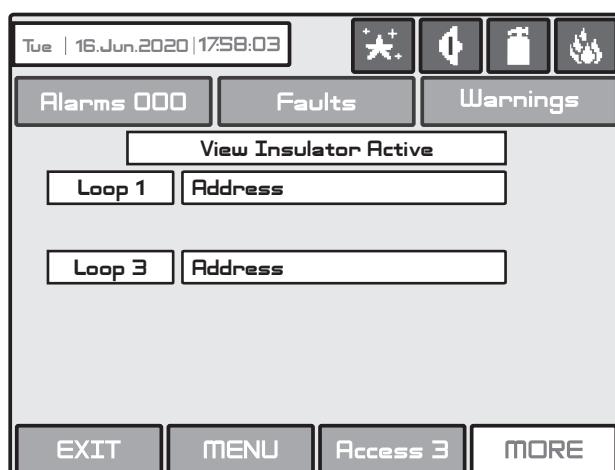
Fig. Screen 52.

5. INSTRUCTION FOR USE

5.1 Status Line

Purpose – Indicates the current status of the fire alarm panel, containing detailed information on the access level, the working mode (day/ night time), the status of the fire output and fire protection, etc - see Fig. Screen 53 and Fig. Screen 54.
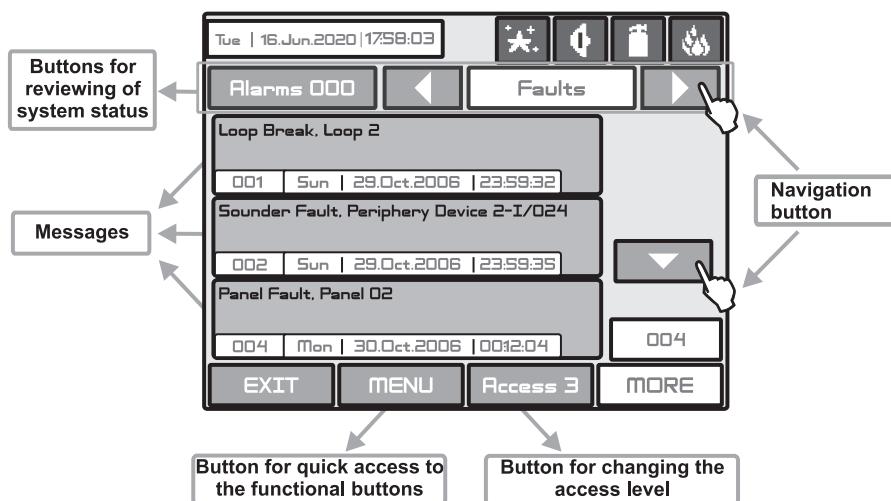
Fig. Screen 53.

• Change of Access Level Button
Used for accessing the Change Access Level menu.

• Button for Quick Access to Functional Buttons
Used for changing over from message review mode to functional buttons mode.

• Buttons for reviewing of system status
The menus can be reviewed at all access levels at any time regardless the system is in Programming or Maintenance mode. The menu for reviewing of Alarms in the system is always active. The fire alarm messages are displayed on the screen and the number of the zone in fire alarm is lighting on.
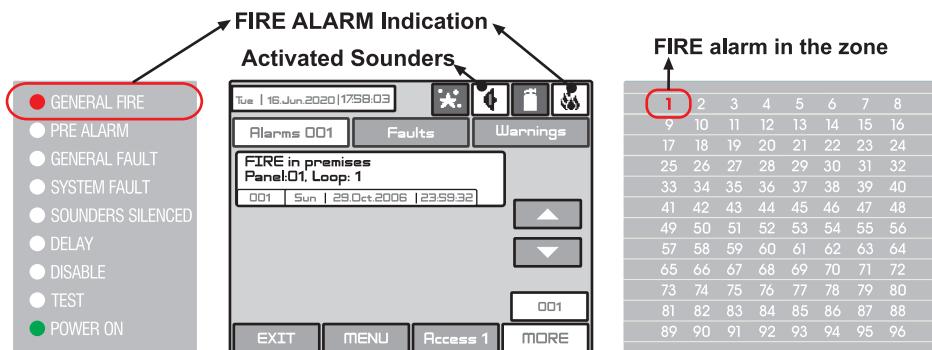
The menus for Faults, Warnings, Disablements and Tests are shown according the system status. In normal operation mode, when there are no active Disablements or Tests, only the buttons for viewing the Alarms, Faults and Warnings are displayed on the screen. If some Tests and Disablements are activated the rest of menus can be reviewed with the arrow navigation buttons.

5.2 Panel Status Icons
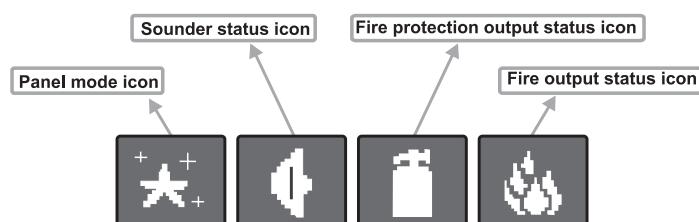
Fig. Screen 54.

5.2.1 Panel Mode Icon

Icon	Description
	LOADING Mode - loads configuration data from permanent memory.
	SAVING Mode - saves configuration data in permanent memory.
	DAY Time Mode - processes signals from detectors with enhanced sensitivity (set for every detector).
	NIGHT Time Mode - processes signals from detectors with enhanced sensitivity (set for every detector).
	ADDRESSING Mode - the panel is in operating mode for setting or changing device addresses, self- or auto-addressing procedure; the panel does not follow the status of the devices and is idle for other kind of operations till the end of the addressing procedure.
	FATAL error or fault - the panel is unable for further operation.
	Evacuation when a common delay (T1) for all outputs is set - blinks together with the output(s) status icons, for which a time delay is set. In the respective output status icon is running countdown presenting the time left to output activation. A continuos sound signal is heard till the countdown is over.
	Evacuation when output delay (T2 - sirens, fire, extinguishing) - blinks together with the output(s) status icons, for which a time delay is set. In the respective output status icon is running countdown presenting the time left to output activation. A continuos sound signal is heard till the countdown is over.

5.2.2 Sounder Status Icon

Icon	Description
	Sounders activated - activated output. **The sounders are delayed** - delay is running prior to activation (programmable for every zone). The icon blinks and the countdown time until activation is displayed.
	Sounders activated in fault.
	Sounders not activated - dormant output.
	The sounders are disabled - disabled output.
	Sounders fault.

5.2.3 Fire Output Status Icon

Icon	Description
	Fire output activated - activated output. **The fire output is delayed** - delay is running prior to activation (programmable for every zone). The icon blinks and the countdown time until activation is displayed.
	Fire output activated in fault.
	Fire output is not activated - dormant output.
	The fire output is disabled - disabled output.
	Fire output fault.

5.2.4 Fire Extinguishing Output Status Icon

Icon	Description
	Fire extinguishing output activated - activated output. **The fire extinguishing output is delayed** - delay is running prior to activation (programmable for every zone). The icon blinks and the countdown time until activation is displayed.
	Fire extinguishing output activated in fault.
	Fire extinguishing output is not activated - dormant output.
	The fire extinguishing is disabled - disabled output.
	Fire extinguishing output fault.

5.3 Messages

The maximal number of messages, which can be displayed is 3. The order in which they are displayed is:

1) first come;

2) all messages in between the first and the last, the scrolling is performed with the navigation buttons;

3) latest incoming message.

The messages displayed are abridged. To view the complete information it is necessary to pass into extended image mode. This mode can be accessed by pressing on the respective message. Return to normal mode is accomplished by pressing the "Exit" button.

5.4 Access Level

The control panel has 3 levels of access. The first level is accessible to users without having to introduce a password. Levels 2 and 3 are accessible only after a password is introduced. The password is entered in the change access level menu. At different access levels users have different restrictions to panel operations, as described in item 3.1.

5.5 General Screen
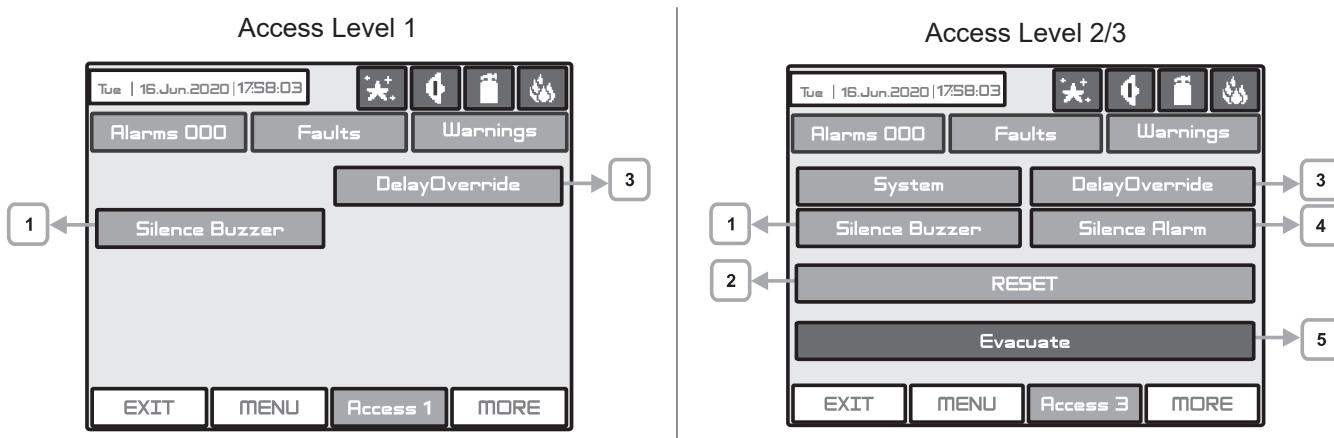
Fig. Screens 55.

1. Silence Buzzer Button

The "Silence Buzzer" button deactivates the internal buzzer. The button is active at access levels 1, 2 and 3.

2. Reset Button

The "Reset" button is active at access levels 2 and 3. Where this button is pressed all activated statuses shall be overruled and the panel shall be brought to a normal state.

3. Delay Override Button

The "Delay Override" button is active at access levels 1, 2 and 3. After it is pressed, all currently active output delays shall be overruled.

4. Silence Alarm Button

The "Silence Alarm" button is active at access levels 2 and 3. Pressing this button will overrule all active sounders and the associated thereto delays. In the case of an alarm present in the panel, pressing this button would cause the "Sounders Silenced" LED to be activated.

5. Evacuate Button

The "Evacuate" button is activated only in access levels 2 and 3. After it is pressed, the sounder and the programmable outputs will be activated, the "General Fire" LED lights up and a warning message is displayed.

*Note: The **System** Button is described in details in part Programming.*

6. APPENDIX
Appendix A - Possible error messages

Text Messages	Description
Alarm	Fire signal from detector.
Loop Device Type Error	A different than the expected type of device has been detected at the address.
Loop Device Fault	The device does not respond (lost or damaged).
Double Address	More than one device with the same address in the loop.
PreAlarm	Fire signal from detector in *2DEVICES* zone.
Evacuate	Activated Call Point or EVACUATE button on the panel.
Loop Device Input Fault	Fault in loop device input.
Loop Device Output Fault	Fault in loop device output.
Loop Device Sounder Fault	Fault in loop sounder output (short-circuit or interruption).
Fault Output - Fault	Fault at problem of not activated output (short-circuit or interruption).
Fire Brigade - Fault	Fault at fire output (short-circuit or interruption).
Fire Protection - Fault	Fire protection fault (short-circuit or interruption).
Loop Device Disabled	Loop device has been disabled.
Chamber Fault	Fault in the detector.
Clean Me Now	Dirty detector chamber.
Test Fire	Fire signal from tested detector.
Signal Blockage	Signal blockage in linear detector.
Hi Signal	Too high a signal in linear detector.
Drift Alert	Sensor compensation limit reached.
Earth Fault	Resistive connection between some signals and earth < 10k.
Battery Low	Low battery.
Charger Fault	Fault in the charging device.
Battery Loss	Loss of electric battery supply.
AC Loss	Loss of mains supply.
Sounder Fault	Fault at sounder output (short-circuit or interruption).
AUX24V Fault	Short-circuit.
AUX12V Fault	Short-circuit.
Periphery Device Fault	The device does not respond (lost or damaged).
Periphery Device Type Error	A different than the expected type of device has been detected at the address. *Note: After fault restoring the message will be automatically deleted.*
External Power Supply Fault	External power supply fault (low battery, loss of battery, charger fault, loss of mains or earth leak).
External Power Supply Loss	Loss of external power supply.
Zone Disabled	The zone has been disabled.
Zone in Test	The zone is in test mode.
Sounder Disabled	The sounders have been disabled.
Fire Brigade Output Disabled	The fire output has been disabled.
Fire Protection Output Disabled	The fire protection has been disabled.

Fault Output Disabled	The fault output has been disabled.
Reset	Resetting of the panel.
Silence Alarm	Sounders silencing.
Ram Error	RAM memory error.
Flash Error	Flash memory error.
Panel Fault	Fault in the connection with another panel (when two or more panels are connected in a network).
Double IP address	Doubling of an IP address.
Double Panel number	Doubling of the panel number (when two or more panels are connected in a network).
Double IP address and Panel number	Doubling of the IP address and the panel number (when two or more panels are connected in a network).
New Periphery Devices Found	New periphery devices have been detected.
New Loop Devices Found	New loop devices have been detected.
Loop Short	Short-circuit in the loop.
Loop Break	Interrupted loop.
Loop Zero Address	There is a device without address number (a device with address 0 is applied).
Activated	Activated output.
Network Fault	Redundant network breakdown. Fault Relay output is activated.
Wrong Error Code	Unknown code for fault message.
Alarm Output	Alarm or fire event from output.
Earth Fault function DISABLED	The Earth Fault indication is disabled.
Transmitting device active	The Fire output is activated.
Extinguishing output active	The Extinguishing output is activated.
Sirens active	The sounders are activated.
User log off	User level exit.
Installer log off	Installer level exit.
User log on	User level entry.
Installer log on	Installer level entry.
GAS ALARM!	Alarm signal from activated gas detector.
PANIC!	Panic alarm signal from device.
Battery High Resistance	High value (Ri>0.3Ω) of the battery internal resistance. It is highly recommended to replace the battery immediately!
High Resistance Disabled	The indication for high battery resistance is disabled.
Internal Buzzer Disabled	The internal buzzer is disabled.

Appendix B - SensoIRIS Device Types

1. Addressable Detectors

• *SensoIRIS T110* - Temperature detector. 3 temperature classes for operation: A1R (58º,RoR), A2S (60º), BS (75º).

• *SensoIRIS T110IS* - Temperature detector with built-in isolator. 3 temperature classes for operation: A1R (58º,RoR), A2S (60º), BS (75º).

• *SensoIRIS S130* - Optical-smoke detector. 4 level of sensitivity: High, Normal, Medium and Low.

• *SensoIRIS S130IS* - Optical-smoke detector with built-in isolator. 4 level of sensitivity: High, Normal, Medium and Low.

• *SensoIRIS M140* - Combined detector (optical-smoke and RoR). 4 level of sensitivity: High, Normal, Medium and Low. It is possible to DISABLE the optical and the temperature part.

• *SensoIRIS M140IS* - Combined detector (optical-smoke and RoR) with built-in isolator. 4 level of sensitivity: High, Normal, Medium and Low. It is possible to DISABLE the optical and the temperature part.

• *SensoIRIS GAS Sense* - Gas detector designed for detection of leaking natural gas and LPG.

2. Call Points

• *SensoIRIS MCP150* - Call point with built-in isolator, plastic box, red color.

• *SensoIRIS MCP150 IP67* - Call point with built-in isolator for outdoor use, plastic box, red color.

• *SensoIRIS MCP150 MR* - Call point with built-in isolator, metal box, red color.

• *SensoIRIS MCP150 PR* - Call point with built-in isolator, plastic box, red color.

• *SensoIRIS MCP150 PB* - Call point with built-in isolator, plastic box, blue color.

3. Bases

• *SensoIRIS MC-D* - Addressable fire base for connecting of SensoMAG conventional detectors.

• *SensoIRIS B124* - Standard base for detectors and sounders (indoor use).

• *SensoIRIS WSB IP65* - Waterproof deep base for sounders, wall mounting (outdoor mounting).

4. Modules

• *SensoIRIS MIO04 (IP55)** - 4 outputs module with built-in isolator.

• *SensoIRIS MIO22 (IP55)** - 2 inputs and 2 outputs module with built-in isolator.

• *SensoIRIS MIO22 M (IP55)** - 2 inputs and 2 monitored outputs module with built-in isolator.

• *SensoIRIS MIO40 (IP55)** - 4 Inputs module with built-in isolator.

• *SensoIRIS MCZ (IP55)** - Conventional zone module with built-in isolator.

• *SensoIRIS MINP M* - Mini module with monitored input - the operation is programmed according the type of the devices connected to the input.

• *SensoIRIS MOUT (IP55)** - Conventional sounders module with built-in isolator.

• *SensoIRIS MOUT 240V (IP55)** - Mains switch module with built-in isolator.

• *SensoIRIS MIMIC* - Mimic/Synoptic module with built-in isolator.

5. Sounders

• *SensoIRIS WSOU* - Wall mounted sounder, red color.

• *SensoIRIS WSOU IS* - Wall mounted sounder with built-in isolator, red color.

• *SensoIRIS WSST* - Wall mounted sounder and strobe, white transparent.

• *SensoIRIS WSST IS* - Wall mounted sounder and strobe with built-in isolator, white transparent.

• *SensoIRIS WS* - Wall mounted sounder and strobe, red transparent.

• *SensoIRIS WS IS* - Wall mounted sounder and strobe with built-in isolator, red transparent.

• *SensoIRIS BSOU* - Base with built-in sounder, white color.

• *SensoIRIS BSOU IS* - Base with built-in sounder with built-in isolator, white color.

• *SensoIRIS BSST* - Base with built-in sounder and strobe, white transparent.

• *SensoIRIS BSST IS* - Base with built-in sounder and strobe with built-in isolator, white transparent.

Note: The module is available in IP55 mounting box.

Appendix C - General Menu Structure

ACCESS LEVEL 1

SYSTEM → SILENCE ALARM → RESET → EVACUATE → SILENCE BUZZER → DELAY OVERRIDE

ACCESS LEVEL 2

PROGRAMMING → DEVICE → LOOP DEVICE → Enable/Disable

MAINTENANCE → TIME → DATE → OUTPUT DELAY → VIEW LOG → TEST → DISABLE

OUTPUT DELAY → SOUNDER → FIRE BRIGADE → FIRE PROTECTION

TEST → ZONE TEST → INDICATION TEST → DEVICE TEST → SOUNDER OUTPUT TEST

DISABLE → LOOP DEVICES → « VIEW
LOOP DEVICES → ZONES → « VIEW
ZONES → ZONE DEVICES → OUTPUTS

ACCESS LEVEL 3

DAY → SOFTWARE REVISION → DISPLAY → VIEW INSULATOR ACTIVE

DISPLAY → COORDINATES → COLORS → POWER SAVE BACKLIGHT

PROGRAMMING → DEVICE → ZONES → INPUTS → OUTPUTS → PANEL → RESTORE DEFAULT → SAVE

DEVICE → PERIPHERY DEVICE → LOOP DEVICE → ADDRESSING → SET ADDRESS

INPUTS → INPUTS → GROUPS

PANEL → ACCESS CODES → LANGUAGES

ACCESS CODES → NETWORK SETTINGS ← NETWORK

NETWORK SETTINGS → PANELS

NETWORK → DISABLE → SOUNDERS MODE → CALLPOINTS MODE

LANGUAGES → DELAY (T1) → PRINTER → KAFKA

PRINTER → COMPANY LOGO

KAFKA → DATECS → IRIS Printer → FAT/FBF → ESPA 444

SET ADDRESS → CHANGE ADDRESS → START SELF ADDRESSING → AUTO ADDRESSING → LOOP ZERO ADDRESS

AUTO ADDRESSING → By ID
AUTO ADDRESSING → By ISOLATOR

Appendix D - Initial Start-up of the System

```
┌─────────────────────────────────────────┐
│   Initial power up of the panel - Power ON│
└─────────────────────────────────────────┘
                    │
                    ▼
┌─────────────────────────────────────────┐
│ Configuration of the system parameters - 5-6 sec. │
└─────────────────────────────────────────┘
                    │
                    ▼
┌─────────────────────────────────────────┐
│     Searching of new Periphery Devices   │
└─────────────────────────────────────────┘
                    │
                    ▼
           ◇ New Periphery      YES      ┌─────────────────────────────┐
             Devices found?  ────────────│  Message on the screen:     │
                                         │ "New Periphery Devices Found"│
                                         └─────────────────────────────┘
                                                        │
                                         ┌─────────────────────────────┐
                                         │  Choose ACCESS button and   │  (3333 - By default)
                                         │  enter Access Level 3 code. │
                                         └─────────────────────────────┘
                                                        │
                                         ┌─────────────────────────────┐
                                         │       Choose SYSTEM         │
                                         └─────────────────────────────┘
                                                        │
                                         ┌─────────────────────────────┐
                                         │     Choose Programming      │
                 NO                      └─────────────────────────────┘
                                                        │
                                         ┌─────────────────────────────┐
                                         │       Choose Device         │
                                         └─────────────────────────────┘
                                                        │
                                         ┌─────────────────────────────┐
                                         │   Choose Periphery Devices  │
                                         └─────────────────────────────┘
                                                        │
                                         ┌─────────────────────────────┐
                                         │ Check the available devices and save │
                                         │ the new ones with SAVE button. │
                                         └─────────────────────────────┘
                    │◄──────────────────────────────────┘
                    ▼
┌─────────────────────────────────────────┐
│       Searching of new Loop Devices      │
└─────────────────────────────────────────┘
                    │
                    ▼
           ◇ New Loop          YES      ┌─────────────────────────────┐
             Devices found?  ────────────│  Message on the screen:     │
                                         │  "New Loop Devices found"   │
                                         └─────────────────────────────┘
                                                        │
                                         ┌─────────────────────────────┐
                                         │       Choose MENU           │
                                         └─────────────────────────────┘
                                                        │
                                         ┌─────────────────────────────┐
                                         │       Choose SYSTEM         │
                                         └─────────────────────────────┘
                                                        │
                                         ┌─────────────────────────────┐
                                         │     Choose Programming      │
                                         └─────────────────────────────┘
                 NO                                     │
                                         ┌─────────────────────────────┐
                                         │       Choose Device         │
                                         └─────────────────────────────┘
                                                        │
                                         ┌─────────────────────────────┐
                                         │     Choose Loop Devices     │
                                         └─────────────────────────────┘
                                                        │
                                         ┌─────────────────────────────┐
                                         │ Check the devices and save the new │
                                         │    ones with Apply button.  │
                                         │ If necessary change their type. │
                                         └─────────────────────────────┘
                    │◄──────────────────────────────────┘
                    ▼
┌─────────────────────────────────────────┐
│   The panel is in Normal Working Mode    │
│     and follows the devices status.      │
└─────────────────────────────────────────┘
```

Appendix E - "Two steps of alarming" Operation Algorithm

```
                            ┌─────────────────────────────┐
                            │        Alarm Event          │
                            └─────────────────────────────┘
                                          │
                            ┌─────────────────────────────┐
                            │  Start of delay T1 countdown │   [🏃] [30] [30] [30]
                            │     (T1: 0 - 60 seconds)     │
                            └─────────────────────────────┘
                                          │
                        NO                │
            ◇ Pressed button          ◇ T1 end?
   YES ◄─── Silence Alarm?              or          ───► YES
  EXIT                                  T2=0
            │ NO                            │ NO
            ◇ Pressed button      NO   ◇ Pressed button
    YES ◄── DelayOverride?  ◄───────── Silence Buzzer?
                                             │ YES
                            ┌─────────────────────────────┐
                            │ Start of delay T2 coundown   │   [🏃] [50] [50] [50]
                            │  (T2: 1 - 540 sec. + T1 rest) │
                            └─────────────────────────────┘
                                          │
                        NO
    YES ◄── ◇ Pressed button      NO  ───►
            Silence Alarm?
            │ NO
            ◇ Pressed button     NO    ◇ T2
    YES ◄── DelayOverride?  ◄───────── end?
                 │ YES                      │ YES
            ┌──────────────────────────────────────────────────────────┐
            │ Activation of sirens; Activation of outputs; Evacuation of the site │
            └──────────────────────────────────────────────────────────┘
```

ROUTINE MAINTENANCE

IRIS control panel does not require any specific maintenance but should the control panel become dirty it can be wiped over with a barely damp cloth. Detergents or solvents should not be used to clean the panel and care must be taken that water does not enter the enclosure.

The control panel contains sealed lead acid battery to provide standby power in the event of mains failure. This battery has a life expectancy of around 4 years. It is recommended that this battery be annually tested in accordance with the battery manufacturer's recommendations to determine its suitability for continued standby applications.

Routine testing of the fire alarm system in accordance with EN54-14 will identify any malfunction of the control panel and any malfunction should be reported to the fire alarm maintenance company immediately.

Detection devices are automatically calibrated on a daily basis and any devices that fail the detector manufacturer requirements will be notified as a maintenance fault. The contamination status menu is also useful in determining detection devices that are approaching their working range limits.

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